

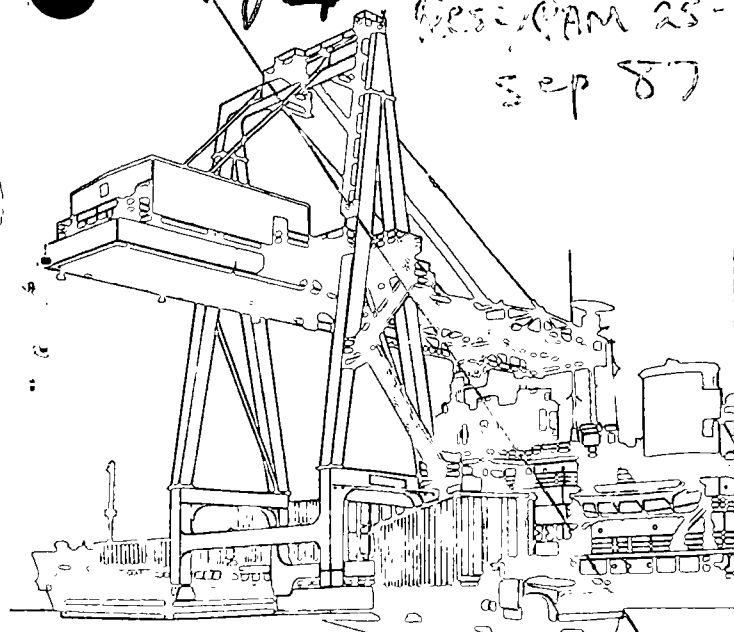
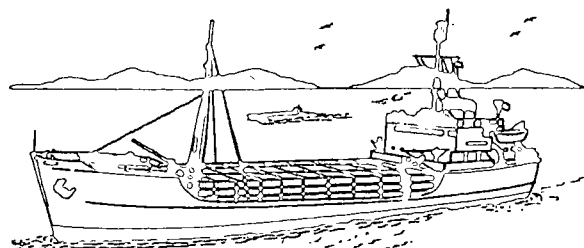
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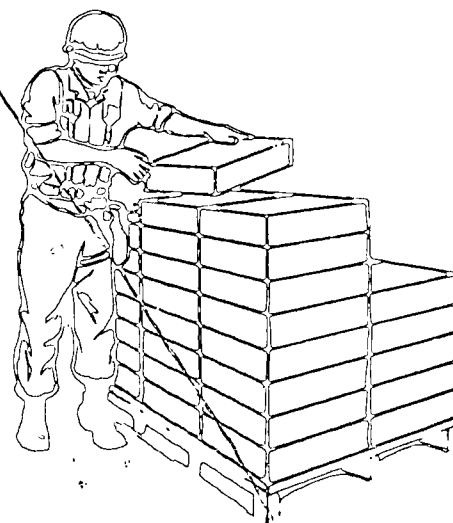
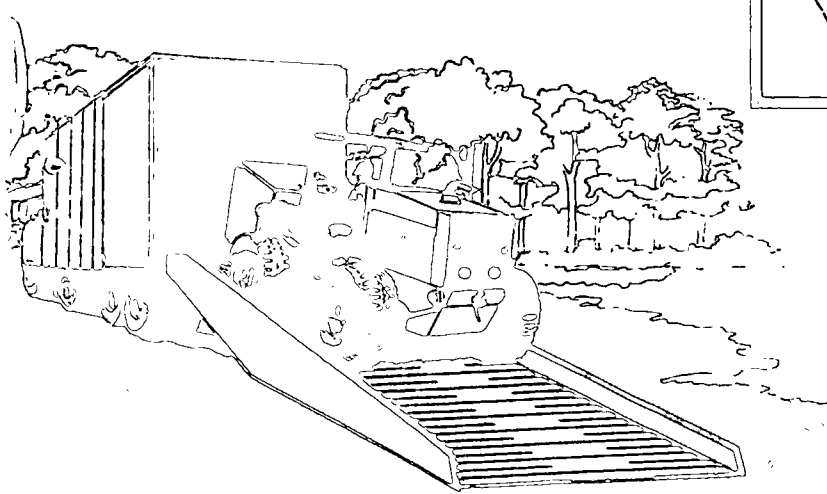
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**CONTAINER
MOVEMENT
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IN
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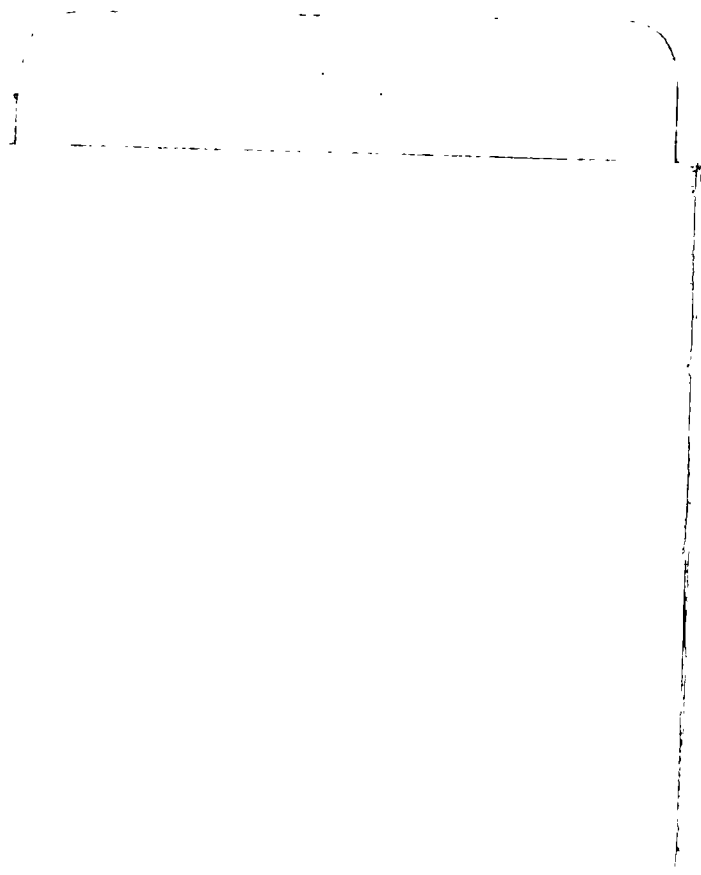


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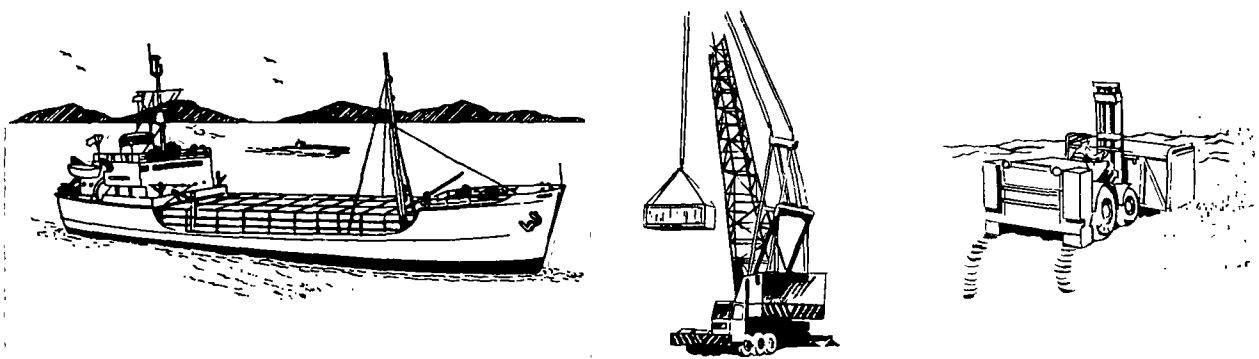
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Washington, DC, 16 January 1981

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**CONTAINER MOVEMENT AND HANDLING
IN THE THEATER OF OPERATIONS**

CONTENTS

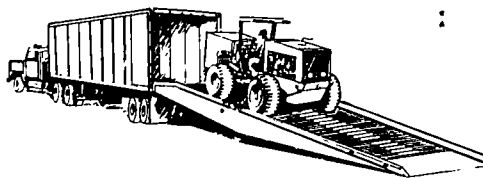
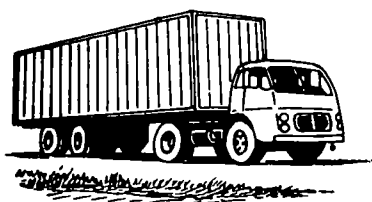
	Page
Preface	ii
CHAPTER 1 AN OVERVIEW	1-1
CHAPTER 2 CONTAINER OPERATIONS IN THE PORT	2-1
CHAPTER 3 CONTAINER OPERATIONS IN THE COMMUNICATION ZONE	3-1
CHAPTER 4 CONTAINER OPERATIONS IN THE CORPS AND DIVISION	4-1
CHAPTER 5 INTRATHEATER CONTAINER SUPPLY SYSTEM	5-1
CHAPTER 6 CONTAINERS AND COMMODITY SUBSYSTEMS	6-1
CHAPTER 7 EQUIPMENT AND UNITS INVOLVED IN CONTAINER OPERATIONS	7-1
APPENDIX A REFERENCES	A-1
APPENDIX B CLASSES OF SUPPLY	B-1
INDEX INDEX	INDEX-1



PURPOSE AND SCOPE

The purpose of this field manual is to establish doctrine for the surface movement and handling of American National Standards Institute/International Organization for Standardization (ANSI/ISO) containers to support the supply system in a theater of operations. Information presented in this manual is based on current logistics doctrine and theater organization and is essentially a synthesis and abridgement of transportation and supply doctrine contained in studies previously approved by Headquarters, Department of the Army.

The manual is primarily designed for use by supply and transportation staff officers and for commanders of units involved in the movement and handling of containers in a theater of operations; however, the manual may also be of value to other commanders and staffs.



RELATION TO OTHER MANUALS

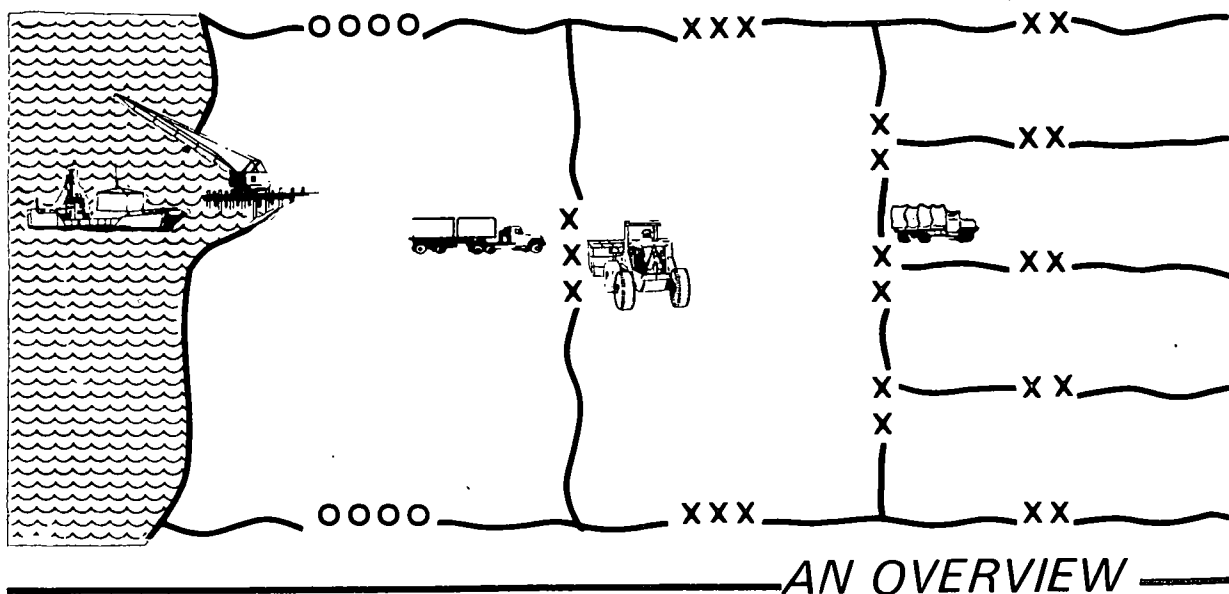
Appendix A lists the publications used as source material for much of the data presented in this manual. Pertinent information has been summarized from these publications and other sources. However, to avoid unnecessary duplication, the appropriate publication is cited in some instances. Users of this manual are encouraged to consult the referenced sources for additional information. DA Pamphlets in the 310-series give publications in related fields.

RECOMMENDED CHANGES

Users of this publication are encouraged to submit recommended changes to improve the publication. Comments should be keyed to the specific page, paragraph, and line of the text in which the change is recommended. Reasons should be provided for each comment to insure understanding and complete evaluation. Comments should be prepared using DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded direct to the Commander, Logistics Center, ATTN: ATCL-CL, Fort Lee, VA 23801.

When used in this publication, "he," "him," "his," and "men" represent both the masculine and feminine genders.

CHAPTER 1



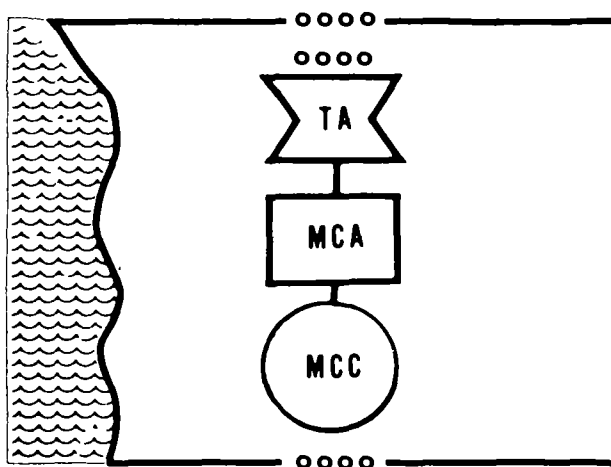
SUPPORTING THE OVERSEAS THEATER

The driving force behind all Army container-related doctrine and equipment requirements is the composition of the commercial maritime fleet. National transportation policy requires the Department of Defense (DOD) to use existing commercial transportation equipment to the maximum extent possible. An active theater of operations will be dependent to a large degree on the containership for support. Effective logistics support will require the efficient movement and handling of containers throughout the transportation system and within supply support activities.

CONTENTS

<i>SUPPORTING THE OVERSEAS THEATER</i>	1-1
<i>CONTAINER CONTROL</i>	1-2
<i>TRANSPORTATION MODES</i> ...	1-2
<i>CONTAINER DESTINATIONS</i> .	1-3

CONTAINER CONTROL



THE FREIGHT MOVEMENT DIVISION IN THE MCC CARRIES OUT FUNCTIONAL ASPECTS OF CONTAINER MANAGEMENT AND CONTROL.

AR 55-355, MILITARY TRAFFIC REGULATION, AND DOD REGULATION 4500.32R, MILITARY STANDARD TRANSPORTATION AND MOVEMENT PROCEDURES CONTAIN PERTINENT INFORMATION RELATING TO CONTAINER MOVEMENT

■ The container is a permanent article of transport equipment designed for repeated use. Control of containers must be established at an echelon that permits surveillance of the overall container situation and centralized management of all container assets in the theater. Within the theater that echelon is the theater army (TA). The controlling activity is the **movement control center (MCC) element** of the TA movement control agency (MCA).

■ Within broad policy directives issued by the theater commander, the MCC develops and monitors the execution of detailed policies and procedures for container service, exercising theater-wide control of all container assets. The MCC maintains information on the location and status of all containers in the theater at all times. Each terminal, consignor, and consignee notifies its **supporting transportation movement office (TMO)** of each receipt and unloading and each loading and release of containers. The TMO relays this information to the MCC. Each mode operator and designated reporting point submits intransit reports.

■ The MCC operates in coordination with the theater army materiel management center (TAMMC) in establishing priorities for container shipments and for the diversion or reconsignment of containers. The DA movements management system (DAMMS), currently under modular development, is an automated transportation operations and management information system for controlling all DOD surface cargo entering, departing, or moving within the theater. The container management function of the cargo module is operational.

TRANSPORTATION MODES

■ The movement of containers within the theater of operations will challenge the resources of the transportation system. The primary transportation modes available are contained in the following subparagraphs.

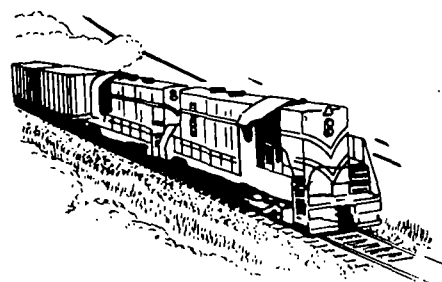
■ Rail, when available, will be a major means of moving large quantities of containers from the coastal terminal to the general support supply activities (GSSA). *The employment of rail forward of the GSSA is generally not considered feasible.* Rail is an excellent mode for the rapid movement of large quantities of containers. Of all the modes, rail is the least affected by adverse weather but its flexibility is limited by dependence upon a fixed roadbed. *Virtually any ANSI/ISO container can be transported by rail.*

■ Motor transport will be used throughout the theater for the movement of containers. It will be the primary mode forward from the GSSAs to the direct support supply activities/division support commands (DSSA/DISCOM) and beyond. Motor transport is the most flexible of the modes for the movement of containers. It will be employed in line haul, local haul, terminal clearance, and transfer operations. Motor transport is the primary surface mode assigned to a theater transportation system.

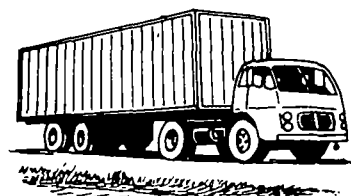
■ Inland water transport will be employed wherever practicable for the movement of containers from the coastal terminal forward. Inland waterways can be used to relieve the pressure on other means of transportation and are particularly useful for moving a large volume of containers. *This mode can be used as an alternate main supply route (MSR) when TPX shipments have been given temporary priority on primary land MSRs.* Although inland water transport is an economical means of transportation, it is relatively slow compared to other modes and is especially vulnerable to enemy action.

CONTAINER DESTINATIONS .

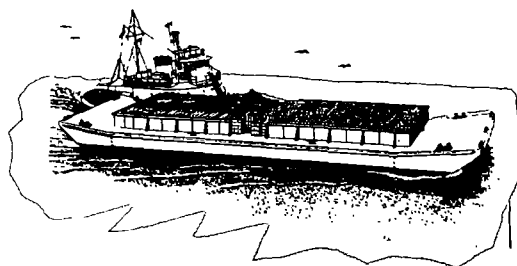
■ A principle of the container distribution system is that containers will be throughput as far forward in a theater of operations as practicable. The most valid basis for determining the supply echelon to which different sizes and types of containers should be moved in the theater of operations is the capability of the supply unit in a particular operational environment to receive



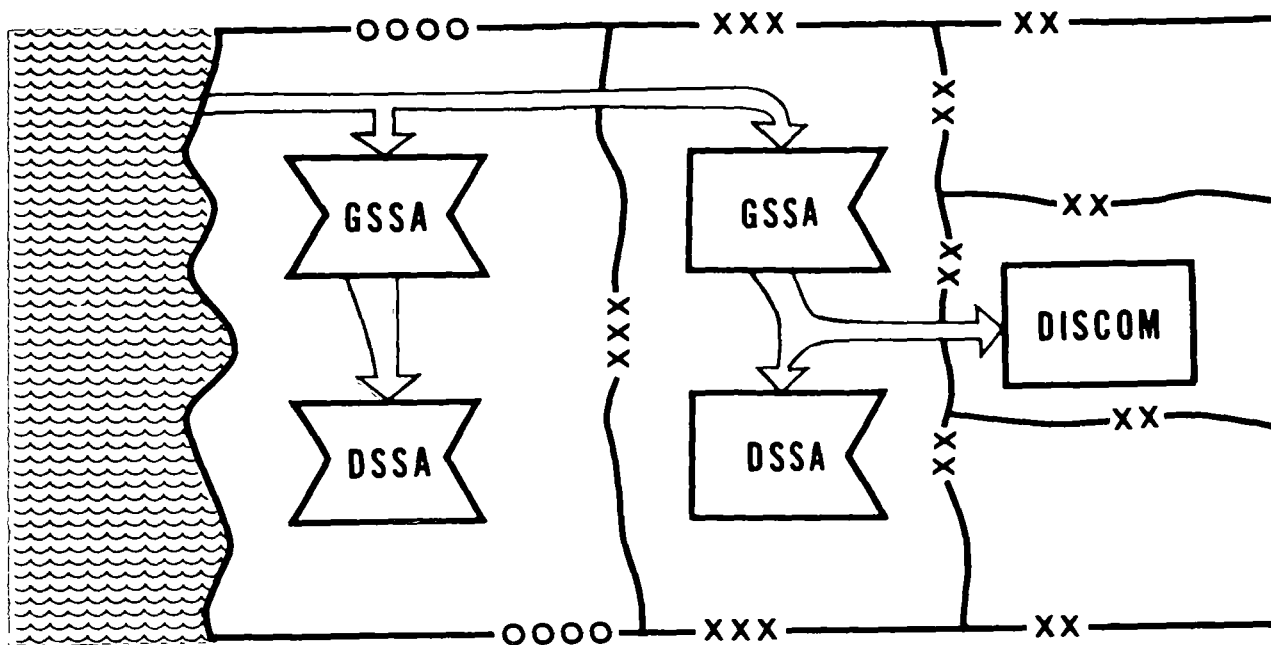
RAIL CAN MOVE LARGE NUMBERS OF CONTAINERS FAST.



MOTOR TRANSPORT IS THE MOST FLEXIBLE WAY TO MOVE CONTAINERS.



WATER TRANSPORT IS AN ECONOMICAL WAY TO MOVE CONTAINERS.



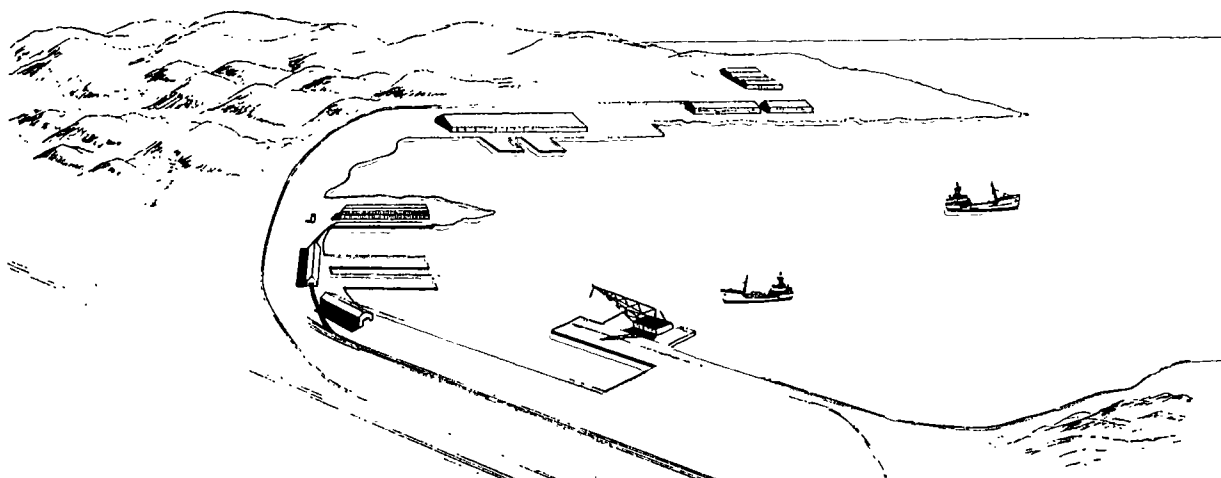
and distribute the quantity, class or subclass of supplies to supported units. Throughput supply shipments in containers from CONUS normally will be made to the general support supply level in *wartime*. Container shipments from CONUS to the direct support level will be the rule in peacetime and the exception in wartime.

FM 55-70, ARMY TRANSPORTATION CONTAINER OPERATIONS, PROVIDES DOCTRINAL GUIDANCE TO PERSONNEL ENGAGED IN TRANSPORTATION CONTAINER OPERATIONS AND COVERS ALL PHASES OF MILITARY AND COMMERCIAL CONTAINER TRANSPORT OPERATIONS BY ALL TRANSPORT MODES.

■ Because of their mission, functions, and location, GSSAs will be able to receive supplies in containers up to **40-feet** in length. The quantity of supplies shipped in any size container will not exceed the capability of these general support supply units to receive and store the material. GSSAs must be fully equipped with suitable container handling equipment (CHE) and materials handling equipment (MHE).

■ At the direct support supply echelon, stockage levels are maintained at a minimum to prevent the accumulation of stocks that will impede mobility in forward areas. The GS supply echelons must support forward direct support supply activities (DISCOM/DSSA) with the quantity of items and frequency of shipments that provide a responsive flow of materiel to users. To minimize handling problems, supplies should be consigned to direct support supply activities as breakbulk cargo or *in containers not exceeding 20-feet* in length. Suitable MHE in direct support supply units is required for stripping containers.

CHAPTER 2



CONTAINER OPERATIONS IN THE PORT

PORT OPERATIONS

The theater army commander must insure that as containers arrive in the theater they can be efficiently discharged and rapidly moved forward to where the supplies are needed. The operation of ports and onward movement of supplies are normally accomplished by the transportation command (TRANSCOM) and its assigned/attached units. The *Military Traffic Management Command (MTMC)* can be employed by the theater army commander to operate ports when agreements can be reached between MTMC and the theater army commander, and MTMC has the capability to operate the ports in both peace and war.

CONTENTS

PORT OPERATIONS2-1

PORT MANAGEMENT2-2

**CONTAINERSHIP
DISCHARGE**2-3

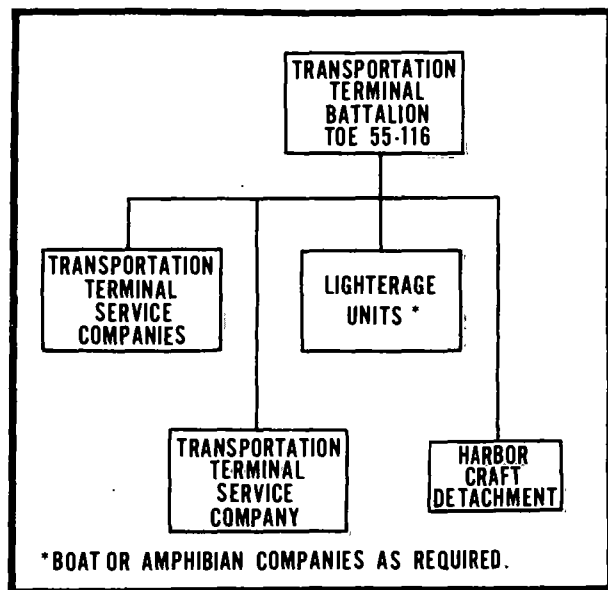
**PORT CLEARANCE AND CON-
TAINER MARSHALING**2-4



In allied operations being conducted from friendly soil, the host nation may choose to exercise its territorial responsibilities, and continue to operate existing container ports both in peace and war. In this case, the US force structure requirements will be reduced. However, the extent of the reduced requirements, particularly the wartime force structure, will be dependent upon agreements that have been concluded and validated between the governments of the US and the host nation concerned.

PORT MANAGEMENT

■ Ports in the transportation system include military and commercial facilities (air and surface) used for loading and discharging, and in-transit handling of cargo and personnel through various modes of transportation. In a *theater of operations (TO)*, the *terminal group (TOE 55-112)*, a subordinate unit of the TRANSCOM, provides a terminal headquarters structure that is designed to provide high-level planning of theater terminal operations for the theater army. The *terminal battalion (TOE 55-116)* is the headquarters unit having operational responsibility. The terminal is the primary area of operation of the terminal battalion headquarters and its principal subordinate units—the *terminal service company (TOE 55-117)*, and transportation boat and amphibian companies. In a fixed port operation, the terminal service company, on a 20-hour basis, can discharge or backload 720 containers daily; in logistics-over-the-shore (LOTS) operations, the company can discharge or backload 300 containers daily. The terminal service company can sort containers by destination and load containers from the marshaling yard on land transportation; the company also accounts for all cargo handled as required by MILSTAMP procedures and prepares transportation documentation. The terminal transfer company transships containers or breakbulk cargo at air, railway, highway, and inland barge terminals at the capacity of 600 containers or 900 short tons of breakbulk cargo daily, or a combination of both. *Details of container port/terminal operations are provided in FM 55-70.*

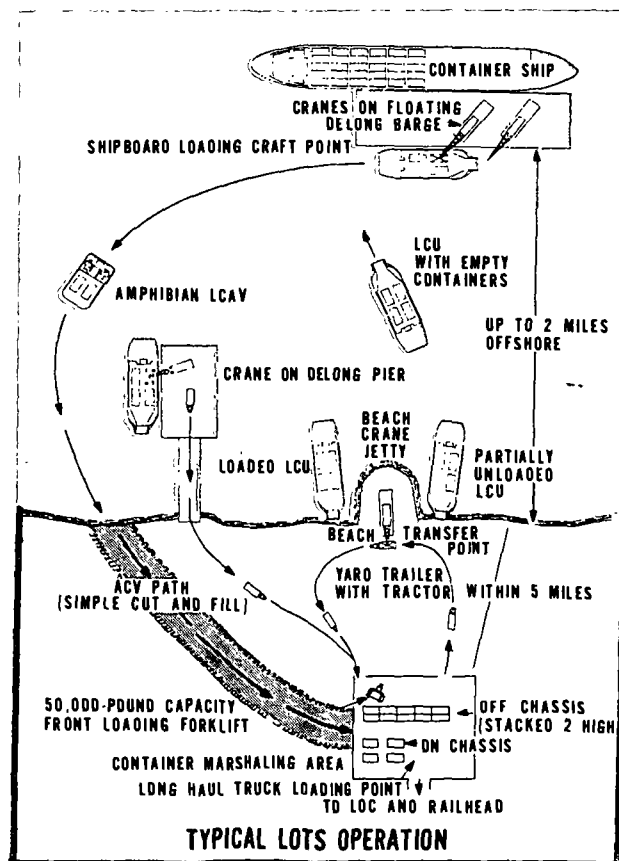
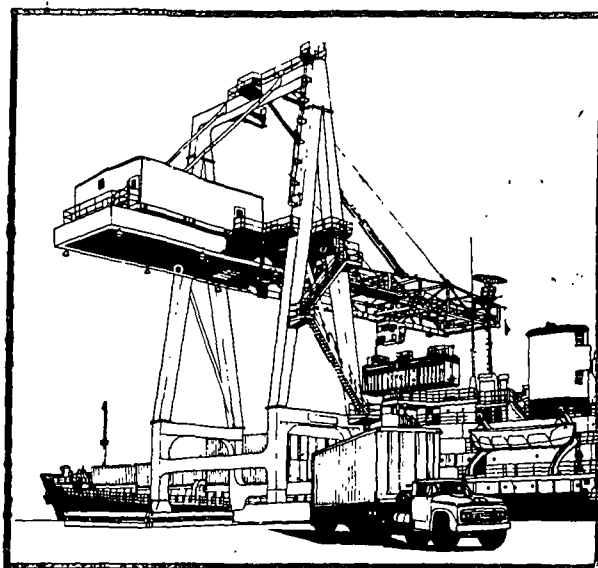


CONTAINERSHIP DISCHARGE

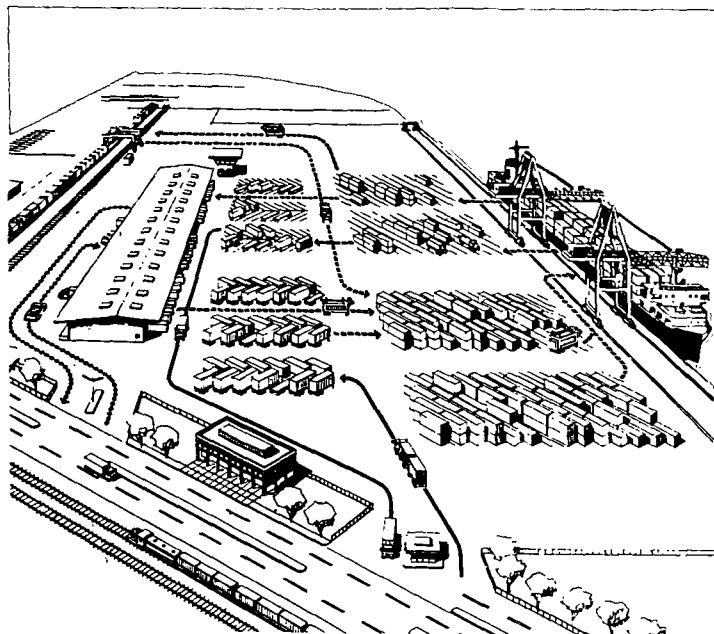
■ The discharge of containerships in peacetime is accomplished by commercial operators in established ports using specially designed container handling equipment. Wartime procedures are discussed below.

■ Fixed port terminals normally provide suitable facilities for the transfer of containers between ocean shipping and inland transport modes. Fixed port facilities will be utilized to the maximum extent possible. The fixed port can generally handle a large volume of containers at a rapid pace, is equipped with modern materials handling equipment, and is usually located at or close by a hub of inland transportation facilities. Containers of all sizes normally can be handled at a fixed port. Offloading containerships in-the-stream also can be used in conjunction with fixed port operations should a shortage of berthing space exist.

■ *Logistics-over-the-shore* operations are an accepted means of providing vital support to a theater of operations when established ports are not available or are not adequate. LOTS operations involve discharging ships anchored offshore and bringing the cargo in country over the beach. LOTS operations are inherently inefficient, costly, and time-consuming. LOTS operations have been further complicated by containerization and the need for special, container-related handling equipment. While LOTS operations will be avoided where possible, the need may exist for LOTS capabilities to supplement fixed ports in supporting requirements of a theater of operations. *Transportation amphibian and boat companies are needed to support LOTS operations.*



PORT CLEARANCE AND CONTAINER MARSHALING



■ The effective discharge (and loading) of containerships depends upon rapid, efficient, and controlled movement of containers between ship and shore. All containers should move through the terminal with minimum delay. The ideal procedure for clearing containers from the wharf/beach would be to place the container directly on line-haul equipment for through movement to inland destination. In many cases, *this may be possible only for throughput express (TPX) shipment of selected containers.* The marshaling yard is an essential part of this shoreside operation, providing a place to hold and process containers pending their further movement.

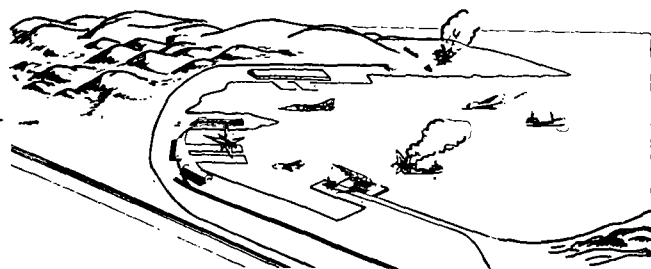
■ The container marshaling yard is basically a temporary holding area that-

- Expedites containership operations by promoting rapid and continuous movement to and from the wharf/beach.

- Levels line-haul peak workloads that otherwise would result from containerships discharge direct to line-haul carriers.

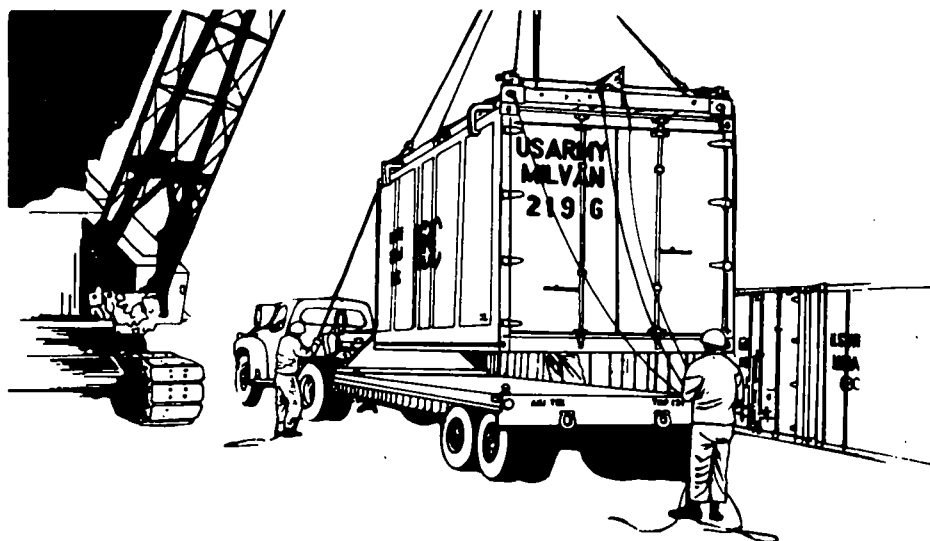
- Permits selective, controlled, and flexible phasing of container movement to inland destination (or to the vessel for retrograde shipments).

■ The marshaling yard is located as near the vessel, rail, or truck discharge/load site as possible. In a theater of operations, enemy capabilities may require some dispersion of activities, or may otherwise affect selection of the location. *Detailed discussion of marshaling yard operations is contained in FM 55-70.*



ENEMY OPERATIONS MAY HAMPER PORT OPERATIONS.

CHAPTER 3



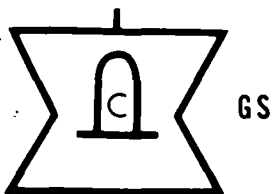
CONTAINER OPERATIONS IN THE COMMUNICATION ZONE

COMMUNICATION ZONE GSSAs

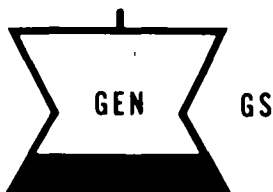
The theater army commander sustains the corps logistically from the COMMZ through the TAACOM. The logistics force structure in the COMMZ must be sufficient to manage, store, maintain, and move supplies forward to the corps. At the same time, the TAACOM must be able to receive and issue resupply from CONUS and establish and maintain a sustaining level of 30 days of non-ALOC items and theater controlled items. The stream of supply by surface LOC will include *classes I, II, III bulk, III package, IV, V, VII, and tonnage type class IX items.*

CONTENTS

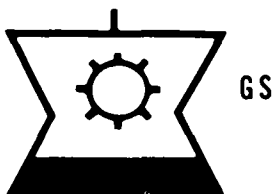
COMMUNICATION ZONE GSSAs	3-1
TAACOM DSSAs	3-5
RETROGRADE AND BACKHAUL	3-7



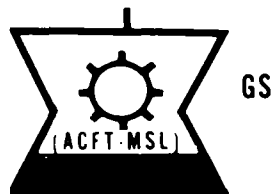
Ammunition, Conventional, GS
TOE 9-74



General Supply Company, GS
TOE 29-118



Repair Parts Supply Company, GS
TOE 29-119



Parts Supply Company
TOE 29-129

(NOTE: This company may be deleted if RGS study approved.)



Heavy Material
Supply Company, GS
TOE 29-127

Stockage of these classes in the COMMZ is designed to maintain 30 days of supply in support of total theater requirements. (Note: Bulk class III is not included in containerized distribution and the distribution of special ammunition is not included in this publication.)

■ General support supply units which perform the distribution and storage functions for these classes of supply at the TAACOM echelon include the following:

□ *Ordnance Company, Ammunition, Conventional, GS, TOE 9-74.* Provides support for conventional class V. (This unit replaces TOE 9-38, conventional company, GS/DS.)

□ *General Supply Company, GS, TOE 29-118.* Provides support for classes I, II (partial), III (package), and VI (if applicable).

□ *Repair Parts Supply Company, GS, Army/CZ, TOE 29-119.* Provides support for class IX (general) and maintenance-oriented class II.

□ *Aircraft and Missile Repair Parts Supply Company, GS, TOE 29-129.* Provides support for aircraft and missile class IX and maintenance-oriented class II.

□ *Heavy Materiel Supply Company, GS, TOE 29-127.* Provides support for classes IV and VII.

NOTE: *The relationship of the GS supply units to the classes of supply for which they are responsible is shown in appendix B.*

■ Throughput distribution of supplies from port/marshaling areas to division and corps supply echelons will be accomplished when feasible. Such distribution will result from coordination between corps/theater/TAACOM MMCs and MCCs. Current doctrine, envisions only about **20 percent of division and corps requirements being supplied by throughput distribution.** The majority of cargo from port areas will be moved initially to GSSAs in the COMMZ. *Figure 3-1 shows supply distribution percentages contained in Logistics Concepts, HQDA, June 1978.*

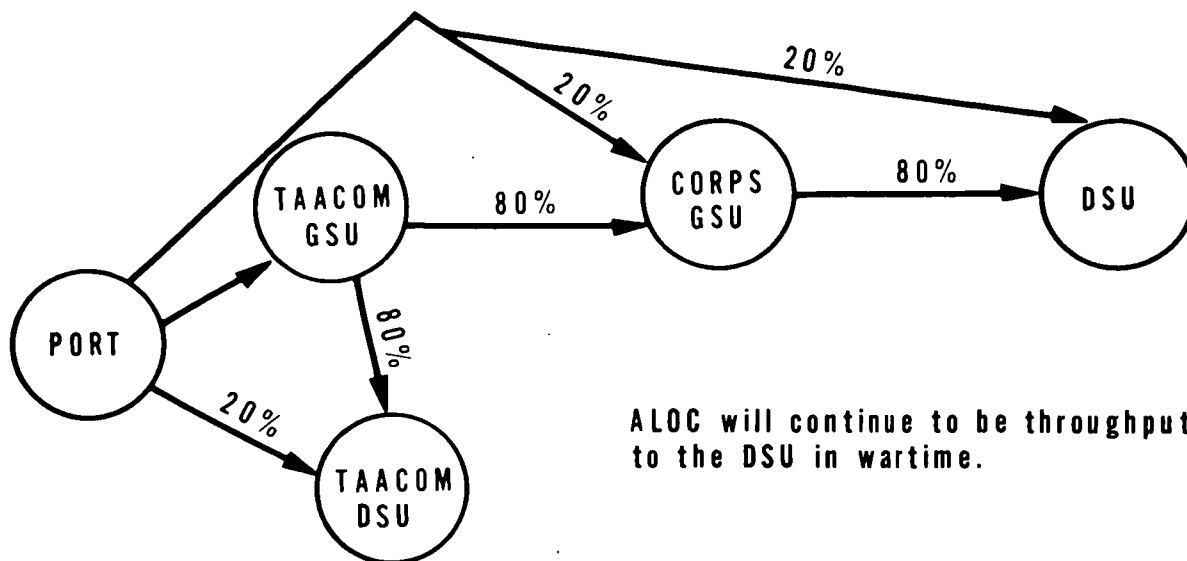


Figure 3-1. Supply Distribution Percentages

■ The *composition* of the commercial maritime fleet, the national container *inventory*, and the *percentage* of supplies containerizable will cause supplies to be received by GSSAs in the COMMZ (TAACOM) in containers 20- to 40-feet in length. Since commercial containers are an integral part of a containership system, a general objective is to ***strip the container within 48 hours*** and return the container to the transportation system. However, the volume of supplies handled and stockage levels maintained by TAACOM GSSAs may not permit meeting this objective under all conditions. The use of (grounded) containers for limited temporary storage purposes by TAACOM GSSAs must be anticipated to some degree — particularly for ammunition units, however, such use will be tightly controlled to insure container assets remain available for transportation purposes. Containers authorized for temporary storage will remain within accountability of the transportation system unless the storage period exceeds 30 days. Containers designated for intertheater movement normally will not remain in-country more than 30 days. If a shortage of containers develops in the transportation system, their use for temporary storage may be prohibited. Based on DOD guidelines, ***theater army policy will govern and regulate the use of containers for temporary storage purposes.***

SUPPLIES WILL ARRIVE IN THE THEATER IN 20- TO 40- FEET IN LENGTH CONTAINERS.

48 HOURS TO STRIP AND RETURN CONTAINER TO THE TRANSPORTATION SYSTEM.

□ When containers are used for limited temporary storage at TAACOM GSSAs, the container must be off-loaded from the transporter/chassis as quickly as possible. The chassis will be even more critical to the transportation system in-theater than the containers. The needed capability for TAACOM GSSAs to be able to remove containers from chassis and to handle, ground marshal containers establishes a requirement for suitable container handling equipment (CHE) in TAACOM GSSAs. The 50,000 pound capacity rough terrain, container handler (50K RTCH) (frontloader) will provide this capability when issued. (*This is the same item of equipment used by terminal service and terminal transfer units.*) However, even with the 50K RTCH, GSSAs will be unable to ground some fully loaded 40-foot containers which may weigh up to 67,200 pounds. In such cases, 40-foot containers must be stripped on chassis using the 4,000 (low mast) pound rough terrain forklift (4R RTFT) and mobile ramp also to be issued to GS and DS supply units.

□ TAACOM GSSAs are expected to be the primary source of supplies for corps GSSAs and TAACOM DSSAs. Additionally, when coordinated by TAACOM/COSCOM MMCs, TAACOM GSSAs will support corps/division direct support supply activities by throughput shipments. The TAACOM GSSAs may use containers in several ways to facilitate their operations or the operations of the receiving GS/DS supply units:

□ Full container loads of a commodity/class/subclass of supply may be retained and released for shipment to a GS/DS consignee upon receipt of a materiel release order (MRO) from the TAACOM MMC.

□ Containers may be opened and stripped over a period of time by successive issues to supported units.

□ When available, containers may be used to consolidate shipments to supported units.

□ Shipments to supported units will be made in containers and as breakbulk cargo. Unless the GS/DS consignee needs, and can accept, a full container stuffed previously in CONUS with one commodity/class/subclass, recontainerization for intratheater shipment may be less efficient than shipping the same supplies as breakbulk cargo. Containers will be most useful for intratheater shipments from TAACOM GSSAs when consolidation, security, or environmental sensitivity of commodities are important considerations.

□ As a principle of containerized distribution in wartime, containers should be loaded for single consignees as much as possible, keyed by GSU DODAAC. Under no condition should container loading be delayed to insure that only a specific category or class of supply be loaded. While a number of exceptions to this intertheater distribution pattern will exist, GS supply units will be the normal theater consignee for containers from CONUS. Accordingly, containers should be stuffed with the category of supplies which supports the mission of specific GS consignees.

□ Containerization presents problems to general support supply units by requiring facilities, equipment, skills, and procedures formerly not needed. Hardstand areas, container off-loading areas, container holding areas, stripping or stuffing areas, and provisions for movement and control of containers within these marshaling or storage areas will be required. Adequate CHE and MHE will be essential for efficient supply operations. *Improvised methods of stuffing or stripping containers are inefficient and time-consuming.* The 50,000 pound rough terrain container handler, the 4,000 pound (low mast) rough terrain forklift, and mobile loading ramp will provide general support supply units the capability to rapidly handle, strip, or stuff containers. Changes in receiving and shipping operations will be required in handling fully loaded containers of single items and in receiving or preparing for shipment containers with mixed loads.

TAACOM DSSAs

■ TAACOM DSSAs provide supply support for Army units located in or passing through the COMMZ. Area support groups (ASG) are normally assigned to the TAACOM to simplify control and logistics support channels in geographical areas within the COMMZ.

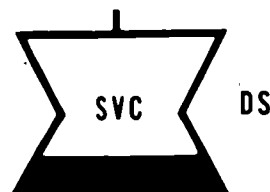
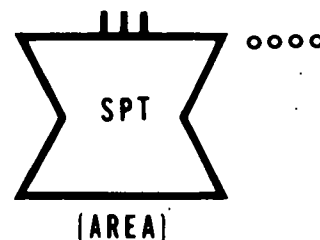
■ *Supply and maintenance units* in the TAACOM which will have a direct support supply mission include the following:

□ *Supply and Service Company, DS, TOE 29-147.* Provides supply support to nondivisional users for classes I, II, III (pkg), III (bulk), IV, VI, and VII supply.

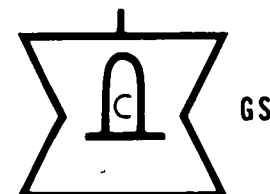
□ *Ordnance Company, Ammunition, Conventional, GS, TOE 9-74.* This unit replaces the *conventional ammunition company, DS/GS, TOE 9-38*, and is capable of providing direct support to users of conventional class V in the COMMZ.

□ *Maintenance units* provide direct support distribution of class IX to supported units.

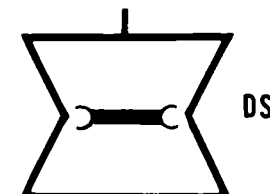
■ The missions, functions, and locations of DS supply units will influence the movement and handling of containers to and within these units. Direct support units provide either supply point or unit distribution to users. With **supply point distribution**, the receiving unit picks up and moves supplies to its area in its own transportation. With **unit distribution**, the supplies are delivered to the receiving unit with transportation provided by the issuing supply unit. Direct support supply units may operate on a *unit basis, an area basis, a task basis, or a combination of these*. **Unit support** is furnished to a designated unit or group of units. **Area support** is furnished to all units located within a designated geographical area. In **task support**, a specified type or amount of a supply unit's capability is furnished to designated units or areas.



Supply and Service Company, DS
TOE 29-147



Ordnance Company,
Ammunition, Conventional GS
TOE 9-74 DS

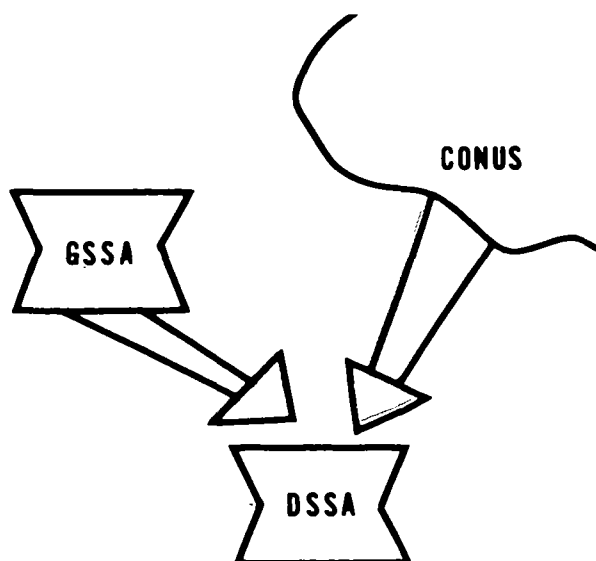


Maintenance units provide DS
IX to supported units

UNIT SUPPORT — SUPPORT FURNISHED A DESIGNATED UNIT OR GROUP OF UNITS.

AREA SUPPORT — SUPPORT FURNISHED ALL UNITS WITHIN A DESIGNATED GEOGRAPHICAL AREA.

**REMEMBER — 2 TO 3 DAY
STOCKAGE AT DS LEVEL.**



**DS UNIT TOEs DO NOT IN-
CLUDE THE 50,000 POUND
RTFL CONTAINER HANDLER.**

■ Assigned to ASGs, TAACOM DSSAs will operate generally on an area or task basis. Supply point distribution will be the norm. Stockage at the direct support level is generally pegged at the 2 or 3 day level (except repair parts); however, TAACOM DSSAs may be authorized substantially increased stocks due to their location and to minimize transportation requirements.

■ Supplies normally will be delivered to TAACOM DS supply units in 20-foot containers or in breakbulk loads. Sources of supply, *except class V* for TAACOM DSSAs will be TAACOM GSSAs (80 percent) and throughput LOC distribution from CONUS depots (20 percent). *Class V* direct support in TAACOM will be provided by the ammunition company, GS, TOE 9-74.

■ Containers on chassis will remain in the TAACOM DS supply unit's area while supplies are stripped from the container or issued from them. The 48-hour objective for return of containers to the transportation system also will be valid for TAACOM DSSAs. Empty containers on chassis normally will be picked up when loaded containers are delivered by transportation. Use of intermodal containers for storage purposes generally will not be authorized for TAACOM direct support supply units.

■ Grounding containers (for example, removing containers from chassis) normally will not take place in TAACOM DSSAs. Heavy equipment for that purpose, such as the 50,000 pound RT container handler (frontloader), will not be included in direct support unit TOE. However, the DS TOE will include the 4,000 pound, rough terrain, (low mast) forklift truck and mobile loading ramp needed for stripping containers on chassis. The forklift truck also will be used to transfer supplies to conventional vehicles and storage locations.

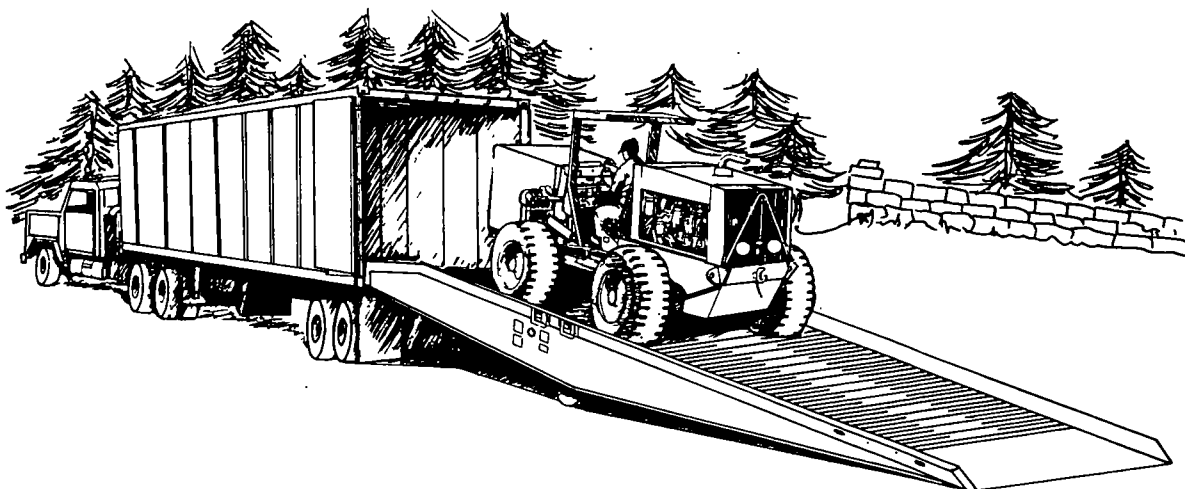
RETROGRADE AND BACKHAUL

Containers being returned to the transportation system from TAACOM GSSAs and DSSAs should be used to backhaul items of retrograde cargo when feasible. This action will require coordination among the supply units involved, transportation mode operators, TAACOM MMC, and theater MCC. While policy normally will encourage the use of containers for movement of retrograde cargo, local conditions and container/transporter requirements could limit such usage.

**USE THE CONTAINERS BE-
ING RETURNED TO THE
SYSTEM TO MOVE RETRO-
GRADE CARGO.**



CHAPTER 4



CONTAINER OPERATIONS IN THE CORPS AND DIVISION

CORPS GSSAs

The Corps GS units are based on the COMMZ for sustaining levels of supply (except for ALOC items) in wartime. Normally, supply levels to be maintained by corps GS units will be in accordance with chapter 3, AR 710-2, however, for doctrinal planning purpose, the supply levels shown in table 4-1 are used.

CONTENTS

CORPS GSSAs 4-1

*CORPS AND DIVISION
DSSAs* 4-3

*RETROGRADE AND
BACKHAUL OPERATIONS* 4-4

Table 4-1. Supply Levels

<u>Class</u>	<u>Days of Supply</u>
I	5-7
II	4-7
III Pkg	7-10
IV	As Required
V	5-7
VII	1 (battle loss day)
IX (Non-ALOC)	15
IX (ALOC)	30

■ General support supply units which perform the distribution and storage for those classes of supply in corps areas are essentially the same as the supply units in the COMMZ, shown on page 3-2.

■ Corps GSSAs are the primary source of supply for divisions DISCOMs and non-divisional DSSAs. As indicated in *figure 3-1*, 80 percent of DISCOM and DSSA support will come from corps GSSAs with only an estimated 20 percent being supplied by intratheater LOC from COMMZ.

■ The geographic location, requirements for increased mobility and dispersion, and lower stockage levels will cause some operational and organizational differences between corps GSSAs and TAACOM GSSAs. However, most of the container handling concepts outlined on page 3-4 for TAACOM GSSAs will remain valid for corps GSSAs.

■ The commodity orientation of GS supply units and their mission responsibilities will allow the transportation system to deliver 20- to 40-foot containers fully stuffed with one commodity grouping to the appropriate GSSA.

■ The volume and nature of supply operations at corps GSSAs may dictate that these units use containers for limited temporary storage purposes. Normally the containers must be removed from chassis. This requirement leads to the corollary requirement that corps GSSAs be equipped to handle, ground, and marshal, containers. The 50,000 pound RT (frontloader) is being acquired to perform this function.

■ Policies for the expeditious return of containers to the transportation system and limitations on the use of containers for storage, outlined on page 3-3, will remain valid for corps GSSAs.

■ Corps GSSAs will use containers to facilitate their operations in generally the same manner as TAACOM GSSAs, discussed on page 3-4. However, all supported supply units of corps GSSAs are direct support units (DISCOM/DSSA). It is expected, therefore, that full container shipments, with mixed or single commodities, loaded by DODAAC, from corps GSSAs to DISCOMs/DSSAs will be the exception rather than the rule. When grounded containers are stripped at corps GSSAs, recontainerization of supplies for further forward movement to DISCOMs/DSSAs generally will be less efficient than breakbulk cargo shipments of most supply classes. A *major exception*, however, concerns the containerized shipment of conventional ammunition. The volume of class V consumption in division areas is expected to be such that corps ammunition GSSAs, as a norm, will temporarily store fully loaded containers in corps storage areas (CSA) to be shipped as directed to forward ammunition supply points (ASP), located near the division rear boundary. *Additional details of container/breakbulk shipments from corps GSSAs are provided in Chapter 6, Commodity Subsystems.*

■ In addition to the 50,000 pound rough terrain container handler (frontloader) needed for off-loading containers from chassis,

corps GSSAs also must be equipped with 4,000 pound (low mast) RT forklift trucks and mobile ramps to facilitate the rapid stripping/stuffing of containers.

CORPS AND DIVISION DSSAs

■ DISCOM and corps nondivisional DSSAs are based primarily on corps GSSAs for their supply support. (See figure 3-1.) The following units perform direct support supply distribution for supported forces:

□ *Supply and Service Company, S&T Bn, DISCOM, TOE 10-07.* Provides supply distribution to divisional units for classes I, II, pkg III, IV, VI and VII.

□ *Supply and Transport Company, Support Battalion, Separate Brigade, TOE 29-77.* Provides supply distribution to brigade units for classes I, II, III (pkg), IV, VI, and VII.

□ *Supply and Service Company, Direct Support, TOE 29-147.* Provides supply distribution to nondivisional users for classes I, II, III (pkg), IV, VI, and VII.

□ *Ordnance Company, Ammunition, Conventional, Direct Support, TOE 9-64.* Provides supply distribution to divisional and nondivisional units for class V. (Replaces conventional ammunition company, GS/DS, TOE 9-38.)

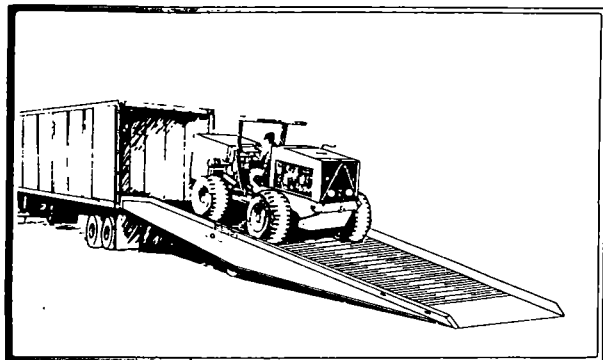
□ *Maintenance Units.* Provide direct support distribution of class IX to supported divisional and nondivisional units.

■ Stockage of supplies in division and corps DSSAs is based on the need for fast response to the requirements of mobile combat units, balanced against the requirement that the supporting units also maintain an appropriate degree of mobility. *Except for repair parts*, stockage in division and corps DSSAs is normally 2 or 3 days of supply. For *repair parts*, supplied by maintenance units, direct support (non-ALOC) supply *stockage is 15 days*. Depending upon operational conditions, forward ASPs may maintain up to 3-5 days of supply.

■ Fully stuffed containers will be moved as far forward as the division rear area (DISCOMs, ASPs, and nondivisional DSSAs) when practical and efficient. Generally, containers moved this far forward should not exceed 20-feet in length. (Throughput of ammunition in 20-foot containers from COMMZ and corps GSSAs to ASPs was briefly discussed on page 4-2.) DISCOMs and other corps DSSAs must be prepared to handle both containers and breakbulk shipments. While shipments received at DISCOM/DSSA from corps GSSAs (*except class V*) usually will be in the form of breakbulk shipments, the supplies throughput from TAACOM GSSAs will frequently be in containers once the intratheater container/supply distribution system has been established.

■ **Containers normally will not go into brigade areas.** The signature of the large containers and attendant handling/stripping problems appear to dictate that containers generally should be stopped and stripped no farther forward than division rear areas. Doctrine for the ammunition transfer point (ATP), which will operate in the brigade area, is in line with this concept. The primary source of supply for the ATP will be throughput shipments from the corps storage area with additional support from ASPs in the division rear area. **All shipments to the ATP, however, are expected to be noncontainerized shipments.** Details of ATP operations are provided in draft FM 9-6 (*Ammunition Service in the Theater of Operations*). In exceptional cases, containers with MHE required for stripping could be forwarded to users. An example of such a case could involve the shipment of barrier materials (class IV) needed to support a specific engineer effort.

■ Containers normally will not be grounded at DISCOMs and other corps DSSAs. Containers on chassis will be stripped as soon as possible and the chassis and container returned to the transportation system. Generally, empty containers (on chassis) will be picked up when loaded containers are delivered by transportation.

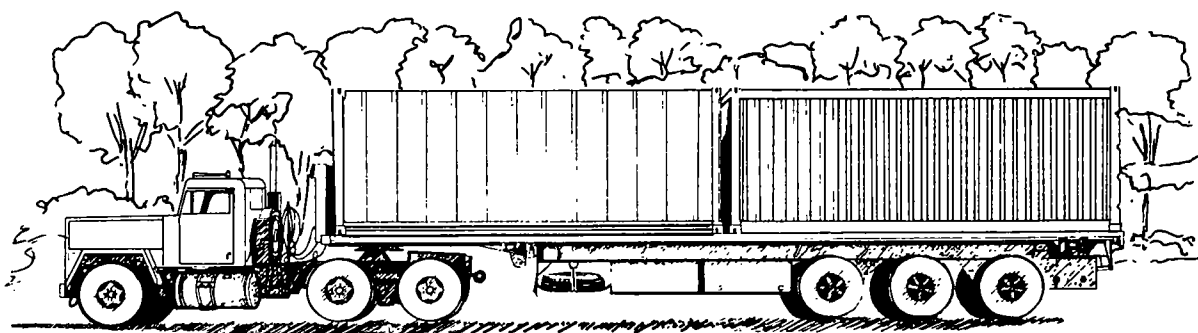


The 4,000 pound RT (low mast) forklift truck and mobile loading ramp are needed in DISCOMs and other corps DSSAs for container stripping.

RETROGRADE AND BACKHAUL OPERATIONS

■ Containers will be used for the retrograde movement of materiel from corps GSSAs and from corps/division DSSAs/DISCOMs as a norm, and as discussed for TAACOM units on page 3-7. Local restrictions on such use will be coordinated among the corps MCC and MMC and the supply maintenance units concerned.

CHAPTER 5



INTRATHEATER CONTAINER SUPPLY SYSTEM

SYSTEM COMPONENTS

The intratheater container/supply system consists of using standard, intermodal containers, moved by the transportation system, to support supply requirements of the theater. Echelons of the supply system with the appropriate direct and general support units are established to provide responsive support and reserve stockage for combat units at division, corps, and theater army levels. Standard containers are essentially large shipping boxes, capable of carrying a high percentage of most supply classes, but whose size and weight can create handling problems at GSSAs and DSSAs which will be consignees for containers.

CONTENTS

SYSTEM COMPONENTS 5-1

MOVEMENT AND CONTROL .. 5-2

RESOURCES 5-2

**INTRA/INTERTHEATER
CONTAINER MOVEMENTS** 5-3

CONTAINER MAINTENANCE . 5-3

Standard containers are designed for repeated use, and their forward and retrograde movement within the theater must be facilitated by supply units as well as transportation units. ***Maintenance of containers must be geared to support the system.***

MOVEMENT AND CONTROL

■ Control of containers at the highest theater level is discussed on page 1-2. *The coordination between theater army and corps MCCs and corresponding theater army, TAACOM, corps, and division MMCs and involved supply units is illustrated in figure 5-1. Close coordination between MMCs and MCCs is necessary in order to provide GSSAs and DSSAs with up-to-date advance information pertaining to containerized cargo movements.*

RESOURCES

■ The movement of containers within the theater depends upon the resources of the transportation system. Modes for container movement are discussed on page 1-3. Needed line haul equipment, such as tractors and semitrailers, is being acquired for transportation medium truck companies. Movement and handling of containers within GSSA and DSSA requires equipment ***not provided by current TOE***. The need to ground and marshal containers at GSSAs requires suitable equipment; i.e., the 50K pound RTCH (frontloader). At both GSSAs and DSSAs, the need to rapidly strip and stuff containers requires the 4K pound (low mast) RT forklift and mobile loading ramp.

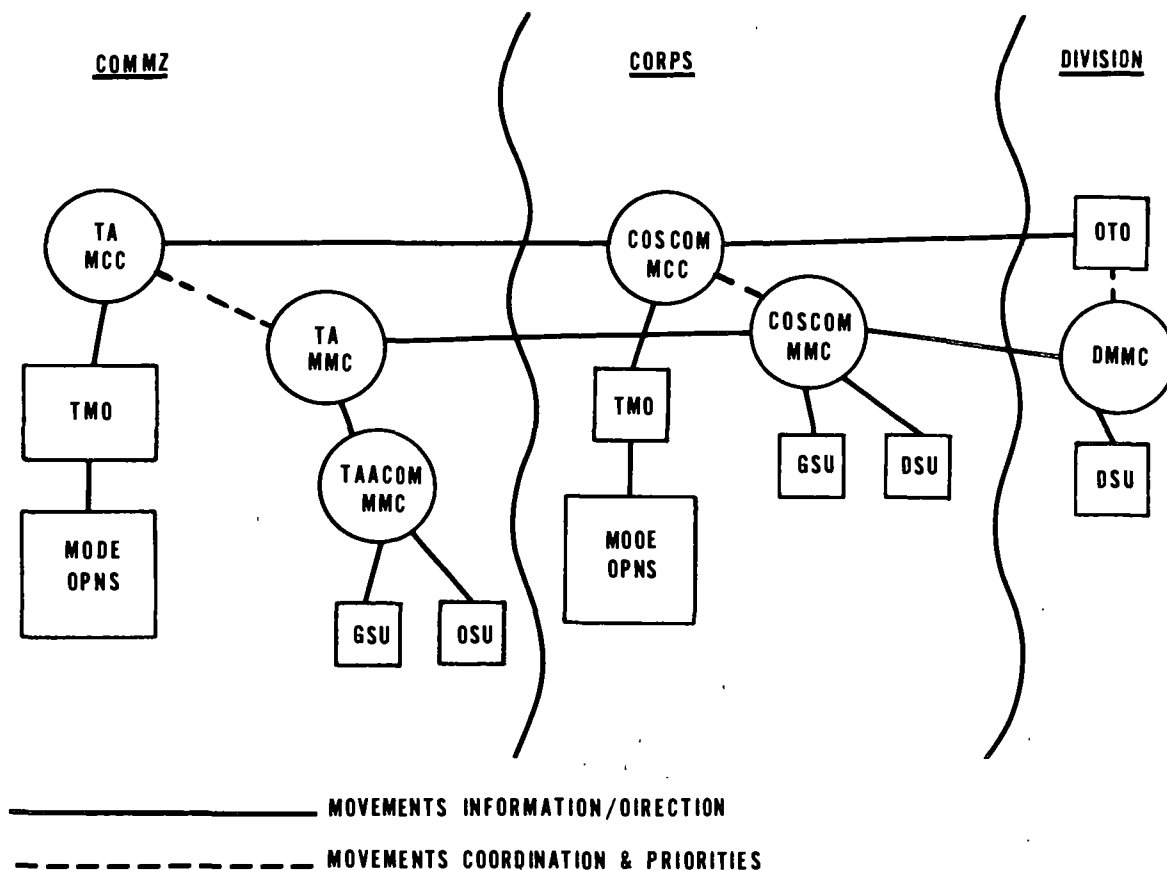


Figure 5-1. Container Movements, Direction and Control

INTRA/INTERTHEATER CONTAINER MOVEMENTS

■ Concepts for the inter and intratheater movement of containers are shown graphically at figure 5-2. As indicated in earlier paragraphs, consignees for intertheater movement of 20-40 foot containers normally will be COMMZ or corps GSSAs. When appropriate for *nonstockage list (NSL)* shipments, containers may be shipped to a GSSA, "marked for" a DSSA. The intratheater movement loop for containers normally should be limited to containers not larger than 20 feet. Additional details of intratheater container movement are provided in chapter 6.

CONTAINER MAINTENANCE

■ The maintenance of containers involves containers which are components of both the intertheater and intratheater container supply systems. The systems will

consist primarily of general cargo containers, but may also include commercial and military flatracks and commercial and military refrigerated containers. These containers generally will be forwarded and retrograded both inter and intratheater, and accounted for as non-TOE equipment by container control offices in-theater and in CONUS. Additionally, intratheater distribution also includes use of the 8' x 8' x 20' military refrigerated container for which TOE accountability will be maintained. Such containers are assigned to certain supply units (for example, the general supply company, GS) which have requirements for local transportation and temporary storage of temperature-sensitive materials.

■ In-theater maintenance of general cargo containers and flatrack containers will be limited to maintenance which is essential to insure the forward and retrograde movement of the container or its contents. Limited emergency maintenance will be the respon-

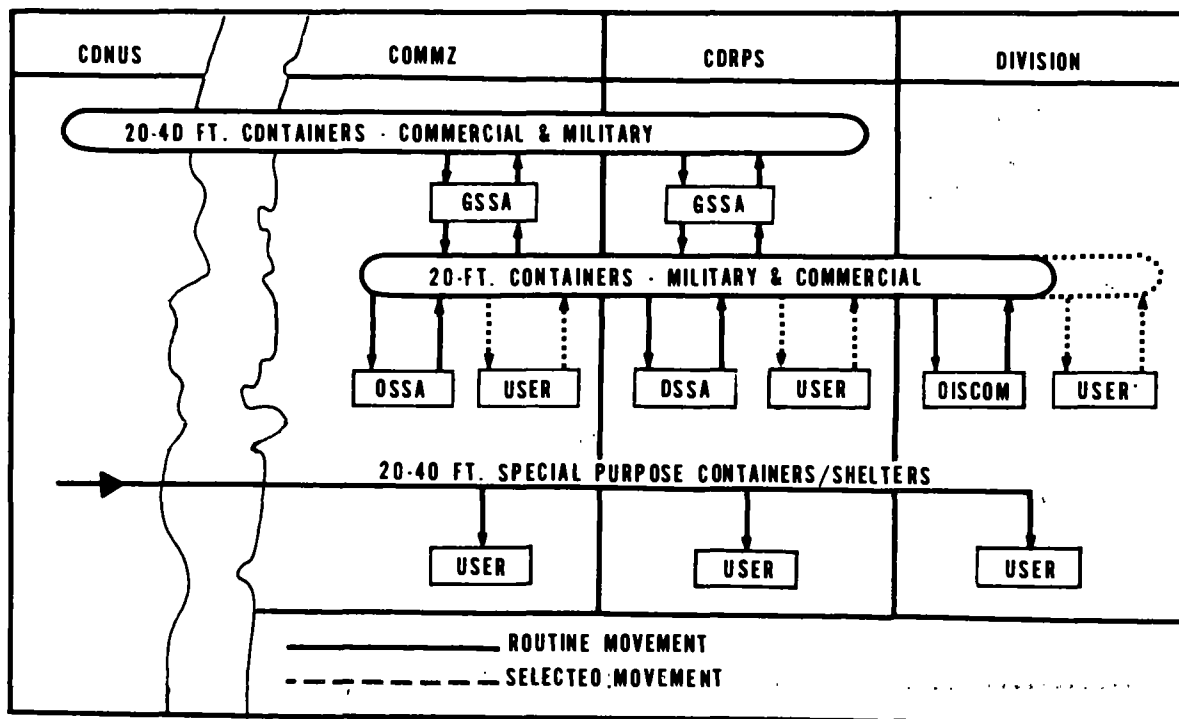


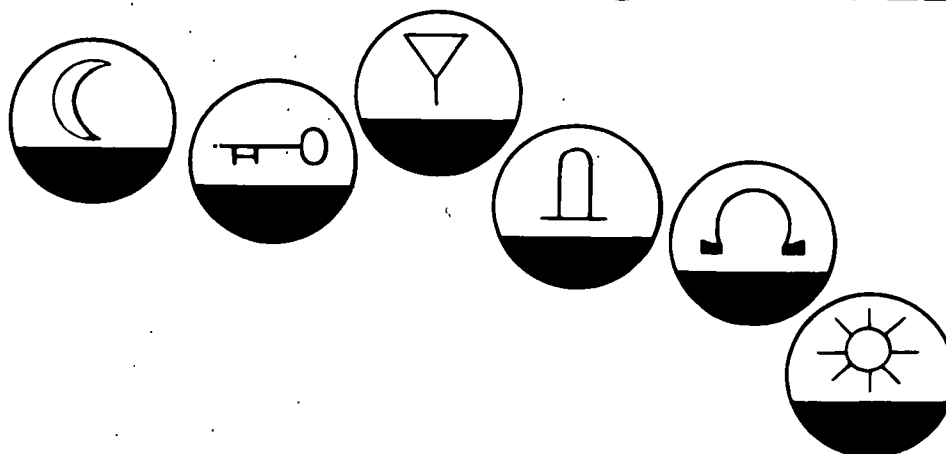
Figure 5-2. Container Movements

sibility of maintenance DSUs or GSUs in division, corps, and TAACOM areas, depending upon the location of the container when repairs are needed. ***Such emergency repairs will be performed on a roadside or in place basis*** where feasible. When warranted by environmental or other conditions, containers may be evacuated to the appropriate area supporting DSU or GSU for such repairs.

■ Refrigerated container maintenance, above the organizational level, through the port of debarkation (POD) and along the LOC will be the responsibility of TAACOM, Corps maintenance DSUs, GSUs, or performed by commercial contract. Obtaining emergency

maintenance of containers and associated generators and refrigeration equipment, through the POD and along the LOC, is the responsibility of transportation units. Upon delivery of refrigerated containers to the general supply company, GS, organizational level maintenance becomes the responsibility of that unit. ***No extensive repairs on non-TOE refrigerated containers will be performed if suitable empty containers are available.*** In such cases, the contents will be transferred rather than to resort to extensive repair. Time, availability of resources, and criticality of materiel will be the governing factors in determining whether to repair the container or to transfer its contents.

CHAPTER 6



CONTAINERS AND COMMODITY SUBSYSTEMS

GROUPING OF SUPPLIES

The common procedures for container distribution to general and direct support supply units, located in the COMMZ corps, and division, have been outlined in *chapters 1 through 5*. Supply distribution subsystems, however, vary according to the characteristics of supplies. These characteristics include requisition procedures, command and control requirements, processing while in supply channels, safety and security measures, and storage and shipping requirements.

CONTENTS

GROUPING OF SUPPLIES 6-1

GENERAL SUPPLIES 6-2

**NONREGULATED CLASS II
AND CLASS III PACKAGED
SUPPLIES** 6-4

**CONVENTIONAL AMMUNI-
TION, CLASS V SUPPLIES** 6-5

**CLASS IV, VII,
AND REGULATED ITEMS** 6-8

REPAIR PARTS, CLASS IX 6-9

To satisfy these requirements and characteristics, supplies are grouped into categories of general supplies, heavy materiel, repair parts, conventional ammunition, special ammunition, and medical supplies.* The characteristics of the several commodity subsystems will further influence the movement and handling of containers.

**Because of special control and supply characteristics, containerization of medical supplies and special ammunition are not addressed in this publication.*



GENERAL SUPPLIES

■ General supplies (consumable commodities) are considered to be **100 percent containerizable**. Consumable commodities consist of class I including dry and perishable subsistence, class VI personal demand items, and class II items including housekeeping and administrative supplies. Instead of single-line requisitions, strength reports, with the addition of any special requirements, act as the triggering device to cause consumable commodities to be shipped.

Strength data are obtained from the personnel service company. The DSSA or DISCOM submits strengths and special requirements to the COSCOM or TAACOM MMC. COSCOM and TAACOM MMCs submit requirements to the TAMMC which in turn submits requirements to the CONUS NICP.

■ **Supply Units Involved.** The general supply company, GS, TOE 29-118, stores and distributes consumables at the general support echelon in both TAACOM and COSCOM. At the direct support level in divisions and separate brigades, storage and distribution of consumables is handled by assigned DS supply and service/transport companies. For nondivisional units, storage and distribution of consumables is provided by the supply and service company, DS, TOE 29-147.

■ **Supply Flow.** The primary source of supply for a COSCOM is theater stock, controlled and managed by TAMMC and shipped by a TAACOM GS company upon receipt of an MRO from the TAMMC. The primary source for a TAACOM DSU is the TAACOM GSU. (The corps GSUs and TAACOM DSUs will receive some of their support (20 percent) in CONUS-stuffed containers directly from the LOC-port areas.)

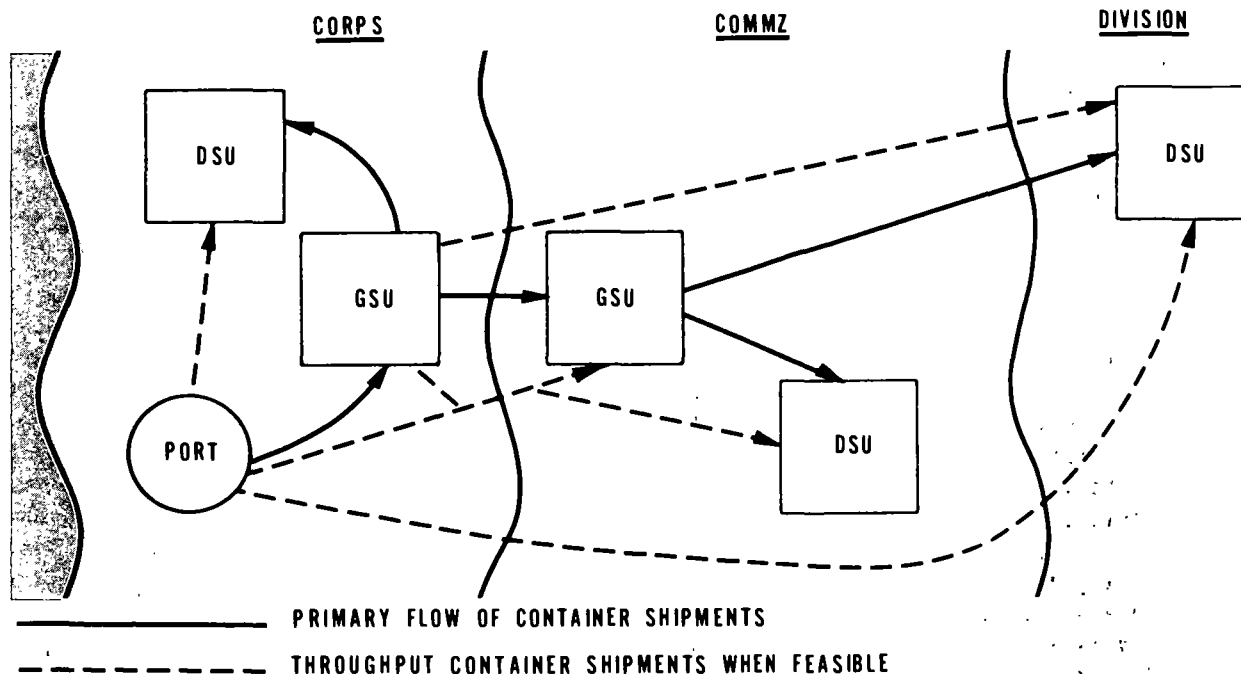


Figure 6-1. General Supplies (Consumable Commodities)

The corps general supply companies, GS, are the primary source of supply for DISCOM units and nondivisional supply and service companies, DS, located in the corps area. Figure 6-1 illustrates the supply flow for general supplies.

■ **Container Movement and Handling.** Container shipments of consumables from CONUS and COMMZ should by-pass general support units, where practicable. For example, operational rations are readily tailorable to division separate brigade, and nondivisional DSU requirements. General cargo containers should be used for such direct, throughput shipments to the extent such shipments are feasible. Consumables (general supplies) will arrive in theater in commercial cargo containers 20-40 feet in length. Coordinated among the TA-MCC/COSCOM MCC and TA/TAA-COM/COSCOM MMCs, the containers normally will be delivered by the transportation system to general supply companies, GS, in the COMMZ or corps. *(Throughput shipment of containers direct to DISCOMs or DSSAs via the LOC will be the exception rather than the norm; such shipments generally should be limited to 20-foot containers in view of probable transport and handling problems with 40-foot containers in forward areas.)* If refrigerated subsistence is involved and arrives in theater in 20-40 foot commercial containers, these containers must be delivered to general supply companies, GS, in the COMMZ and corps. Further distribution of refrigerated subsistence to DISCOMs or DSSAs will be made in 20-foot military refrigerated containers which are organic equipment of the general supply company, GS.

■ **Receipt of Containers.** General supply companies, GS (TAACOM and corps) and their counterpart divisional and nondivisional DSUs should be alerted by the associated materiel management center to anticipate the arrival of container shipments. When commercial 20-40 foot containers are delivered to the general supply company, GS, they normally will be marshaled into suitable holding areas and grounded. Transportation assets (tractors and semitrailers) will be returned immediately to the transportation system. Returning tractors and semitrailers

will carry empty containers and retrograde materiel *in accordance with existing (TA) policy*. Containers arriving at divisional and nondivisional DSSAs normally will not be grounded. Containers, while remaining on semitrailers, will be stripped of contents as rapidly as possible and the semitrailer and container returned to the transportation system. For many operational environments, it may be expedient to return an empty container/chassis when a stuffed container/chassis is delivered. Returning containers from divisional and nondivisional DSUs will carry retrograde materiel as directed.

■ **Storage in Containers.** Stockage levels at GSSAs and DSSAs are discussed in chapter 4; stockage levels will influence requirements for temporary storage of supplies in containers.

□ **GSSAs.** General supply companies, GS, will have a requirement to store stocks of consumables in both the corps area (5-7 days) and the COMMZ area (30 days). It can be anticipated that a portion of these stocks will be stored in grounded, 20-40 foot containers. Many container-related considerations will influence the organization and operation of storage functions at these GSSAs to include the following: requirements to identify, organize, and account for stocks onhand; requirements for marshaling areas with acceptable surfaces (preferably hards-tand) for grounding containers when required; requirements to recontainerize supplies; requirements for breakbulk shipments; requirements for security; and requirements for dispersion and other defensive measures.

□ **DSSAs.** Direct support units storing and distributing consumables are located in allechelons of the theater (division, corps, COMMZ). Stockage requirements for consumables are normally 2 or 3 days of supply except for TAACOM DSSAs where additional stockage may be advisable. Some of the same container-related considerations that influence GSSA storage also will influence DSSA storage; however, these considerations will have different magnitude and priority. Identification and organization of stocks of consumables to support mission requirements also is of highest priority at

DSSAs. Containers on chassis must be spotted in suitable areas prior to stripping. Container stripping must be accomplished as soon as possible on a level surface. Supplies stripped from containers must be rapidly reorganized as necessary for temporary storage and onward movement to using units. DSSAs will have no requirement to recontainerize supplies *except for retrograde materiel being returned in otherwise empty containers*. At DISCOMs and other forward area DSSAs, high priority must be given to dispersion and security measures both active and passive. Containers on chassis present a signature not easily disguised. ***Forward area DSSAs must take advantage of all natural cover and man-made facilities to conceal and protect their operations.***

■ ***Container/Breakbulk Shipments.*** Shipments of general supplies (consumables) in containers to DISCOMs/DSSAs will be made from both TAACOM and COSCOM general supply companies, GS. Shipments will be directed by TAACOM and COSCOM MMCs; movements requirements will be coordinated with TA and COSCOM MCCs. Shipments of consumables from DISCOMs/DSSAs to using units will be in the form of container inserts, consolidation boxes, pallets, and other breakbulk cargo. No movement of general supplies in containers to using units (for example, below the DS echelon) is planned.

□ ***GSSAs.*** TAACOM general supply companies, GS, will make theater stock shipments to Corps general supply companies, GS, in fully loaded 20-40 foot containers. In many instances, these containers would have been previously stuffed in CONUS and remained unopened during their period of temporary storage at the TAACOM GSSA. In some situations, TAACOM GSSAs also may recontainerize supplies (normally in 20-foot containers) for shipment to Corps GSSAs, TAACOM DSSAs or for throughput shipment to DISCOMs or other forward area DSSAs. However, in many situations, *recontainerization of supplies would be less efficient than breakbulk shipments once containers have been stripped at TAACOM GSSAs*. Transportation capabilities will be a key factor in recontainerization policy. Corps

(COSCOM) general supply companies, GS, will make shipments of consumables to DISCOMs and other corps DSSAs in 20-foot containers or in breakbulk cargo shipments. Some recontainerization of supplies in 20-foot containers may occur at corps GSSAs. In other instances, recontainerization of consumables at corps GSSAs may be unnecessary and less efficient than breakbulk shipment once a container has been stripped at the corps GSSA.

□ ***DSSAs.*** Consumable commodities are issued by direct support supply activities in accordance with support doctrine discussed on page 3-5. Intermodal containers will not be used for the issue (shipment) of consumable supplies to using units. Issues of consumables to using units will be in the form of container inserts, consolidation boxes, pallets, and other breakbulk cargo. In AIM division areas, the large intermodal containers will not go forward of the Supply and Service Company, located in the division rear area.



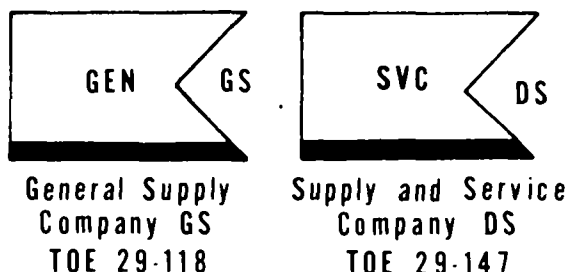
PKG

NONREGULATED CLASS II AND CLASS III PACKAGED SUPPLIES

■ An estimated 100 percent of these items are containerizable. MILSTRIP or MILSTAMP procedures are followed for requirements and shipments flow. COSCOM or TAACOM fill DISCOM or DSSA requests from general support stocks or pass the requirement to the TAMMC. The TAMMC maintains appropriate theater reserve stockage by requisition on the CONUS NICP. *Supply flow for these items is illustrated in figure 6-1.*

■ ***Supply Units Involved.*** The general supply company, GS, TOE 29-118, stores and distributes these commodities in the COMMZ and corps. At the direct support level in divisions and separate brigades, storage and distribution of these commodities is handled by assigned DS supply and service/transport companies. For nondivisional units in the

corps and COMMZ, storage and distribution is provided by the *supply and service company, DS, TOE 29-147.*



■ **Container Movement and Handling.** The movement and handling of containers stuffed with these commodities to, within, and from general supply companies, GS, in the COMMZ and corps areas will be essentially the same as for consumable commodities discussed on page 6-3. Container shipment to replenish TAACOM and COSCOM stocks will originate in CONUS; however, a large percentage of container shipments to the COSCOM GSSAs will be forwarded from TAACOM GSSAs. (See figure 3-1.) Shipments in containers or as breakbulk cargo will be made to DISCOMs and other DSSAs from corps and TAACOM GSSAs. DISCOMs and other DSSAs are final consignees for containers; these direct support units make further breakdown of these commodities for distribution for using units. An exception to normal issue and shipment procedures for general supply companies, GS, may occur with class III (pkg). When maintenance units, which are large users of class III (pkg), are located in the vicinity of a general supply company, GS, direct issue to the maintenance unit may be more expedient than the normal issue through a DS supply and service company. Such shipments to the maintenance unit should be breakbulk cargo shipments.

**MARK CONTAINERS
LOADED WITH HAZARDOUS
MATERIAL IN ACCORDANCE
WITH STANAG 2023 AND
MILITARY STANDARD 129-F.**



CONVENTIONAL AMMUNITION, CLASS V SUPPLIES

■ **Ammunition supply (figure 6-2)** is unique in its volume and criticality. Conventional ammunition is considered to be 100 percent containerizable. The theater commander allocates ammunition credits to corps. Corps provides controlled supply rates to divisions. TA and corps MMCs control ammunition flow based on allocations and information received from corps tactical headquarters. Conventional ammunition is shipped through a “*push type*” supply system to support those known quantities consumed on a daily basis; however, it is “*pulled*” in those quantities needed to support planned operations or to meet special requirements.

■ **Supply Units Involved.** The *ordnance company, ammunition, conventional, GS, TOE 9-74*, stores and distributes conventional ammunition at the general support echelon in both TAACOM and corps areas. This unit is also capable of providing direct support to users of class V in TAACOM and corps rear areas. (This unit, in the general support function, will replace the current unit, conventional ammunition company, GS/DS, TOE 9-38.) The *ordnance company, ammunition, conventional, DS, TOE 9-64*, stores and distributes conventional ammunition for divisional and nondivisional units by establishing ASPs near the rear of supported divisions or within the division rear area. (This unit in this direct support function will replace the current unit, conventional ammunition company, GS/DS, TOE 9-38.)

■ **Supply Flow.** TAACOM general support units (TOE 9-74) are the primary source of supply for corps general support units (TOE 9-74) operating corps storage areas (CSA). TAACOM GSSAs also will provide the primary locations for storage of theater reserve ammunition stocks (30 days). Additionally, TAACOM GS units will provide area direct support to users of conventional ammunition in the COMMZ.

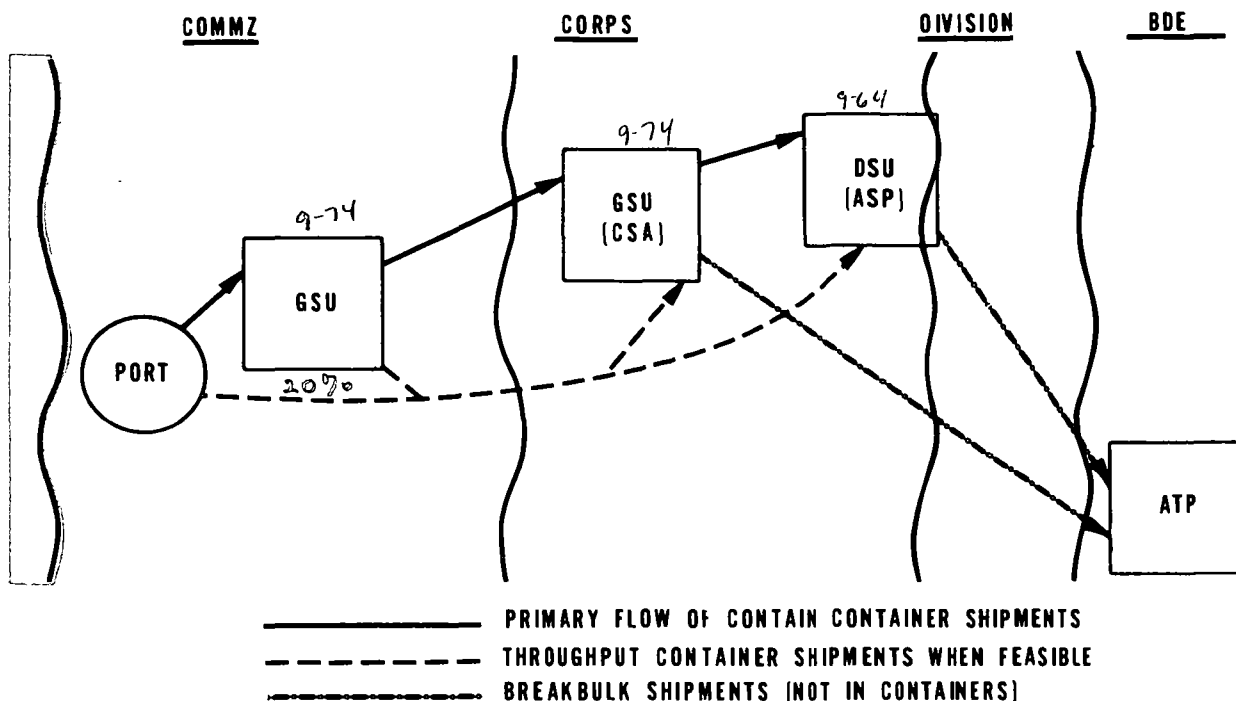


Figure 6-2. Conventional Ammunition

□ Corps general support units (TOE 9-74) operate CSAs on the basis of one CSA per division. The corps GSSAs provide storage of ammunition reserve stocks for the corps (5-7 days). Corps GSSAs are the primary source of supply for direct support supply companies (TOE 9-64) operating forward ASPs. The corps GSSAs are also the primary source of high-usage ammunition throughput to the *ammunition transfer points (ATP)*, which are established within divisions in each brigade rear area. Corps GS units also provide area direct support to users in the corps rear area.

□ Direct support ammunition supply companies (TOE 9-64) operate forward ASPs in division rear or corps forward areas. The unit can operate from two locations, and normally establishes two ASPs per division. The DS companies are the primary source of ammunition supply for divisional units and normally will stock 3-5 days of reserve stockage for the division. Ammunition companies have traditionally operated on the basis of supply point distribution to using divisional units. However, doctrine for operation of ATPs will require that a portion of their resupply be provided from supporting ASPs.

■ **Container Movement and Handling.** Ammunition is expected to arrive in theater both in containers and in breakbulk shipments. The density of ammunition and associated handling problems dictate that ammunition containers normally should not exceed 20-feet in length. Shipping regulations require that containers loaded with ammunition have special restraining devices. These devices are constructed inside the container to keep the load from shifting or vibrating. Such devices will facilitate the rapid conversion of commercial general cargo containers for carriage of ammunition. Ammunition containers must be controlled by number to insure that they remain within the ammunition support supply system.

■ **Movement of ammunition containers in the theater** will be coordinated among the TA or COSCOMMCC and the TA, TAACOM, or COSCOM MMC. Priority for LOC movement of ammunition containers, based on urgency, magnitude of requirements, and receiving capabilities of consignees, will be as follows: (a) throughput of containers direct to ASPs from seaport complexes; (b) delivery of containers to corps storage areas; (c) delivery of con-

tainers to TAACOM GS units in COMMZ.

□ Despite movement priorities, current doctrine foresees only about 20 percent of division (ASP) and corps (CSA) requirements being satisfied by direct LOC shipments from seaport complexes (*figure 3-1*). TAACOM GSSAs are expected to provide an additional 20 to 30 percent of ASP requirements by throughput shipments that by-pass corps storage areas. While the use of containers for LOC shipments direct to ASPs should be used to the extent feasible, a majority of CONUS stuffed containers and breakbulk shipments will be delivered to GSSAs in COSCOM and TAACOM to accommodate the volume of ammunition shipments, facilitate controlled and timely support of combat forces, and maintain reserve stockage levels.

■ **Receipt of Containers.** General support units in both the TAACOM and COSCOM will receive ammunition in 20-foot containers. When containers are delivered to these GSSAs, they normally will be marshaled into suitable holding areas and grounded. Tractors and semitrailers will be returned to the transportation system. The policies concerning time limitations for container stripping and storage and the use of containers for retrograde shipments, discussed on page 3-3, also apply generally to TAACOM or COSCOM ammunition GSSAs. Direct support units, operating forward ASPs also will receive some shipments in 20-foot containers. At ASPs, however, containers normally will not be grounded. Containers will be stripped as rapidly as possible, the contents placed on pads, and the transport equipment (tractor, chassis, and containers) returned to the transportation system. Equipment requirements at GSSAs include the 50,000 pound RT container handler (frontloader). Both GSSAs and DSSAs need the 4,000 pound RT forklift truck and mobile ramp for stripping/stuffing containers.

■ **Storage in Containers.** Stockage levels and locations for conventional ammunition in the theater are noted on page 6-5. The volume of ammunition to be handled in TAACOM and COSCOM GSSAs indicates that containers may have to be

grounded. Detailed procedures and techniques for expedient field storage of containerized ammunition in grounded containers require further development, test, and evaluation. Such procedures and techniques should be based on established doctrinal precedents for ammunition storage, and must incorporate the specialized requirements for container handling. Further development and testing of ammunition storage procedures should determine area requirements and hazard characteristics to include quantity, distance, and class factors.

□ **GSSAs.** TAACOM and COSCOM GSSAs will temporarily store a substantial percentage of their stock in containers fully stuffed in CONUS with high usage ammunition (for example, 155mm, 8-inch, tank main gun) which will be forwarded to supported supply units in full containers as directed. In some situations, corps storage areas may have a requirement for temporary storage of containers on semitrailers. *While this is a departure from the norm of grounding, retaining containers on chassis at times may be required to support fast-moving tactical operations.* This will require approval of the TA MCC or COSCOM MCC. Some recontainerization of ammunition may be desirable, particularly in TAACOM GSSAs. The basis for such recontainerization would be to forward tailored throughput shipments in containers to ASPs. Recontainerization at corps GSSAs is not considered to be a likely requirement except for shipment of retrograde cargo.

□ **DSSAs.** Storage sites at ASPs, in division rear or corps forward areas, are selected to provide responsive support to combat forces in division areas. Stockage levels are normally 3-5 days based on support and mobility requirements. Storage sites should take advantage of all natural cover and man-made facilities to conceal and protect their operations. Requirements for dispersion must be balanced against requirements for rapid, accurate loading of combat units' resupply vehicles. ASPs will receive ammunition in 20-foot containers and in breakbulk shipments. When containers arrive, the contents will be stripped as rapidly as possible, and the containers returned to the

transportation system. Grounding containers at ASPs for temporary storage purposes is not a norm since the heavy equipment (50K pound frontloader) needed for grounding would create additional problems in these relatively forward areas. An exception to the norm may exist when mobility requirements of the ASP might warrant the temporary retention of containers on chassis at the ASP.

□ **Container/Breakbulk Shipments.** TAACOM and COSCOM ammunition GSSAs will ship fully loaded containers as well as breakbulk cargo to ASPs. The volume (percentage) of such support is estimated in *figure 3-1*, and is discussed on page 6-7. The benefits of containerization can be best realized when CONUS-stuffed containers can be throughput as far forward as practicable without rehandling/redocumenting the contents. For high usage type ammunition, shipment of CONUS-stuffed (unopened) containers is feasible through TAACOM GSSAs or corps GSSAs to ASPs-even when throughput shipments are curtailed.

□ Unlike shipments to ASPs, corps storage area shipments to ATPs in brigade areas will be entirely in the form of breakbulk shipments. No movement of containers to ATPs is contemplated.

□ Issues at ASPs to using units will be *breakbulk* issues-pallets, boxes, and individual rounds. ASP shipments to ATPs likewise will be breakbulk shipments. In the ammunition system, containers generally are not expected to be moved forward of ASPs.



CLASS IV, VII, AND REGULATED ITEMS

□ Class IV is considered to be approximately 75 percent containerizable; class VII approximately 20 percent. These items are normally controlled through command channels. Unit supply elements submit requests through intermediate commands to the approving commander. The

COSCOM MMC, TAACOM MMC, and TA MMC advise the appropriate commanders on the availability of items. On command approval, the appropriate MMC issues shipping instructions to storing GSSAs in COSCOM or TAACOM which make shipments direct to the requesting unit (*figure 6-3*). When order and shipping time permits or the requested item is not available in theater, the requirement is passed to the CONUS NICP. The CONUS depot consigns and ships the item direct to the user when intermediate processing is not required. In many instances, however, policy may require that the item(s) be shipped to a TAACOM or COSCOM GSSA "marked for" the using unit.

□ **Supply Units Involved.** Currently, the general support supply unit primarily concerned with these commodities is the heavy materiel supply company, GS, *TOE 29-127*. This company processes class VII items prior to delivery and distributes class IV items direct to using units. The heavy materiel supply company is designed to operate in both the TAACOM and COSCOM at the general support level. Those divisional and nondivisional supply and service/transport units, noted on page 4-3, will participate in the distribution of these commodities as required.

□ **Supply Flow.** In the current theater organization, the heavy materiel supply company, GS, in TAACOM or corps normally is the consignee for CONUS shipments in or out of containers. In most situations these shipments will be directed to TAACOM GSSA (*figure 3-1*). Class VII items frequently may be consigned to a GSU "marked for" a particular unit. Shipments of class IV may warrant throughput express (TPX) shipment via the LOC from coastal ports or GSSAs to users depending upon the urgency of the requirement.

□ **Container Movement and Handling.** Except for class IV materiel, container shipments of these commodities normally should be delivered from the port area to COSCOM or TAACOM GSSAs. Considerations for container handling and requirements for the receipt and storage of containerized supplies will generally parallel

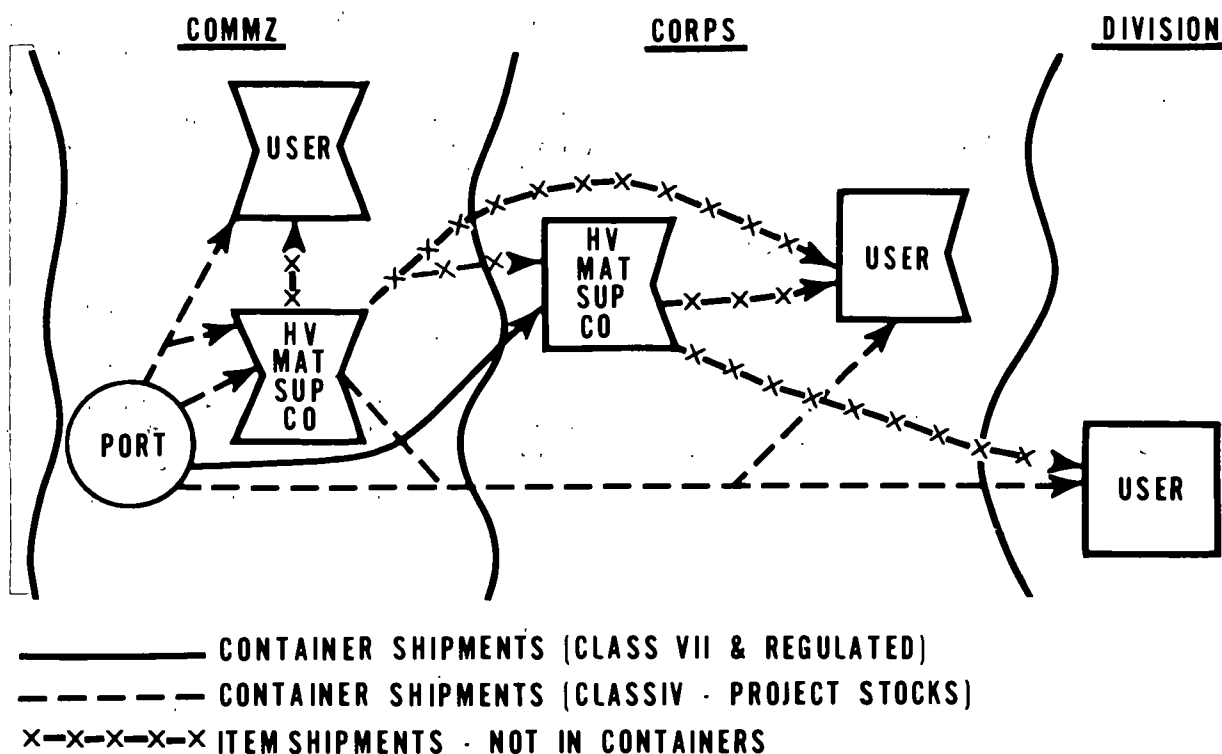


Figure 6-3. Class IV, Class VII, and Regulated Items

the handling of containers in general supply units, GS, (page 6-3). Container related equipment requirements are also similar; however, no recontainerization except for retrograde movements is anticipated. Additionally, when containerized class VII shipments are received at GSSAs, requirements for field processing at the GSSA will influence priorities for container stripping and use of containers for temporary storage. *Except for barrier materials*, shipments of class IV or class VII in containers forward of corps GSSAs normally would not be expected.

■ **NOTE:** A factor which will influence the percentage of class IV and class VII items containerized is the availability of flatrack containers. The percentages shown on page 6-8, reflect only the use of general cargo containers. If flatrack (platform-type) containers were available, most vehicles could be shipped in containerships. Relatively few flatracks are in the US commercial inventory.



REPAIR PARTS, CLASS IX

■ Because of their criticality and because the line items number in thousands, problems in distribution, storage, identification, and issue of repair parts are unique. Requisitions for combat essential ALOC class IX and maintenance related class II will flow from respective maintenance units to COSCOM or TAACOM MMCs and direct from COSCOM and TAACOM MMCs to CONUS NICPs. Requirements for combat essential (non-ALOC) class IX items will flow through the TA MMC prior to being passed to CONUS. Although approximately 80 percent of class IX (non-ALOC) is containerizable; the ALOC will provide the primary means for maintaining combat ASLs on the basis of 45 days of supply (plus OST) at corps DSUs and

30 days at corps and TAACOM GSUs. Standard (ANSI/ISO) containers normally will not be used in the ALOC; the Air Force 463L pallet is the primary means for unitizing repair parts shipments by ALOC. These shipments will go directly to the DSU level whenever possible. Non-ALOC class IX, however (for example, engines, tracks, tires, batteries), is expected to be moved by surface LOC; standard containers will be used for these surface shipments.

■ **Supply Units Involved.** At the general support supply echelon in the corps, repair parts are distributed by the repair parts supply company, GS, corps, *TOE 29-119*. In the TAACOM, the unit responsible is the repair parts supply company, GS, COM-MZ, *TOE 29-119*. In the corps and TAACOM, storage and distribution of aircraft and missile repair parts will be provided by the aircraft and missile repair parts supply company, GS, *TOE 29-129*.* At the direct support echelon, repair parts are provided to using organizations by maintenance units.

■ **Supply Flow.** Supply by surface LOC (figure 6-4) will be designed to maintain 30 days of supply in the COMMZ in support of total theater class IX requirements and 15 days of supply in the corps. These stockage levels are the sustaining levels in wartime for tonnage type items. *The wartime flow of supplies (including tonnage type class IX) and throughput goals for intratheater surface LOC are shown in figure 3-1.*

□ TAACOM repair parts supply companies are the primary source of non-ALOC supply for corps GSSAs. TAACOM units are also the primary source of repair parts supply for GS and DS maintenance units located in the COMMZ.

□ Corps GSSAs are the primary source of non-ALOC supply for GS and DS maintenance units operating in corps and division areas.

□ Maintenance units provide direct support to using units in all command areas of the theater-division, corps, TAACOM. In

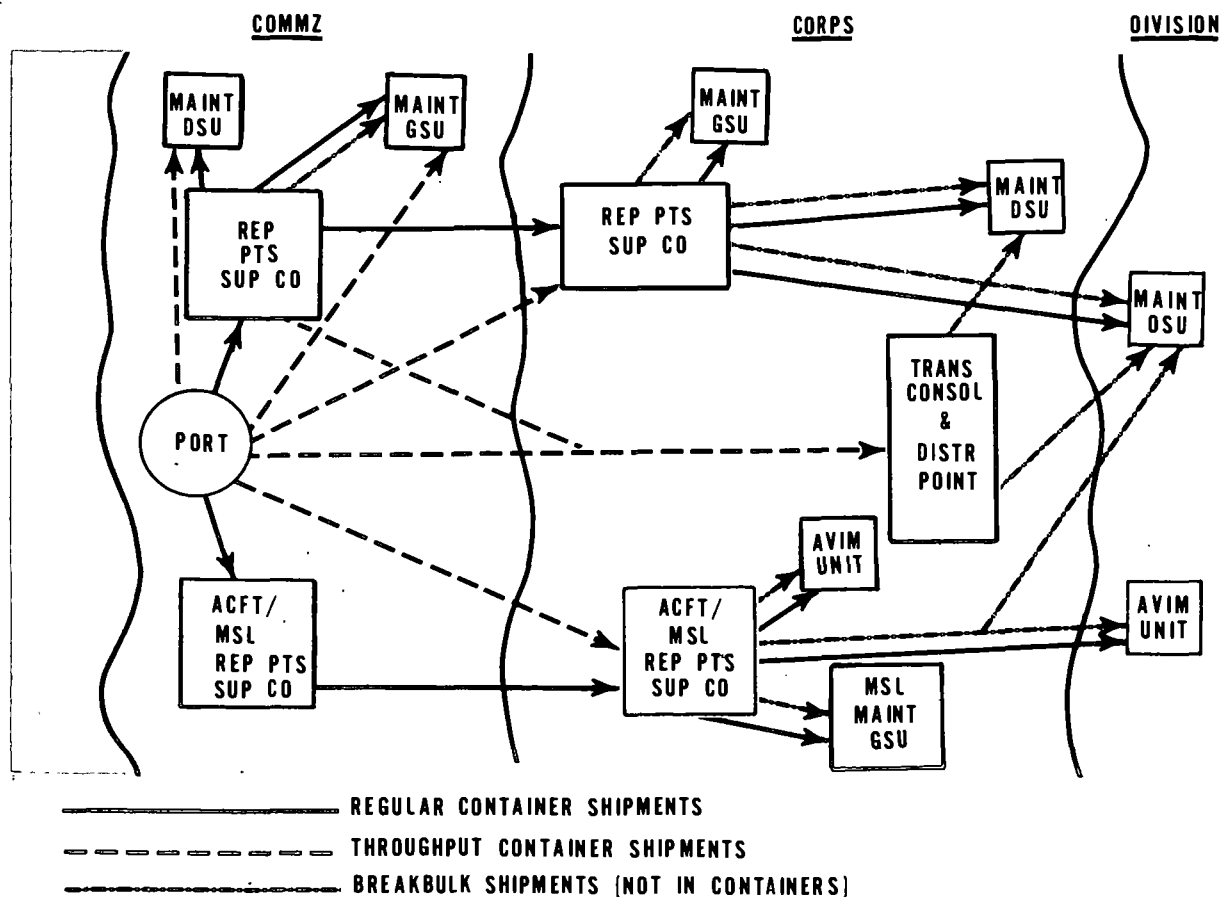


Figure 6-4. Repair Parts (Class IX)

addition to repair-and-return, normal supply issues, direct exchange (DX), and operational float procedures are followed.

■ **Container Movement and Handling.** Tonnage-type repair parts will arrive in the TO in containers 20-40 feet in length. Coordinated among the TA/COSCOM/MCCs and the TA/TAACOM/COSCOM MMCs, containers normally will be delivered to a corps or TAACOM repair parts GSSA. To achieve the benefits of containerized, throughput distribution, movement priorities generally should be: *first to corps GSSAs and second to TAACOM GSSAs*. This basic pattern for inter/intratheater distribution of tonnage-type repair parts by surface LOC appears essential to gain in-theater control rapidly over the many line items involved, in order to promote timely, accurate response by the GSSAs to the needs of maintenance DSUs and GSUs. In line with the basic distribution pattern, and to further facilitate repair parts supply operation in-theater, container normally should be stuffed in CONUS with *only one* of the principal repair parts categories: combat vehicles, wheeled vehicles, communications-electronics, aviation, missiles, general support, and ground support. Further distribution of tonnage-type repair parts from corps and TAACOM GSSAs to maintenance GSUs and DSUs will be made both in containers and as breakbulk cargo shipments (container inserts, consolidation boxes, pallets, and individual items).

*The Restructured General Support Study has recommended that *TOE 29-129* be deleted. If the study is approved, *TOE 29-129's* mission will be assumed by *TOE 29-119*.

□ While the basic pattern for distribution of tonnage-type repair parts foresees GSSAs in corps and TAACOM as the usual consignees for containers, a number of other distribution variations can be anticipated. In all cases, responsiveness to user requirements and the capability of consignees to accept full container loads will govern their applicability in a particular operational environment.

□ Containers may be shipped from

CONUS to a GSSA "marked for" delivery to a maintenance GSU to DSU.

□ Coordinated by COSCOM/TAA-COM MMCs and TA/COSCOM MCCs containers stuffed in CONUS with tonnage-type repair parts may be delivered direct via the LOC from the port to using maintenance units, by-passing GSSAs.

□ Containers with repair parts for multiple consignees may be forwarded to transportation, consolidation and distribution (C&D) detachments (Team JC, *TOE 55-560*) where containers are stripped, and the contents delivered to consignees as breakbulk cargo. Consignees for such shipments generally would be maintenance DSUs or GSUs in the division or corps area. GSSAs would be by-passed in this type of shipment since delivery would be made from the transportation system direct to maintenance units.

■ **Receipt of Containers.** Requirements associated with container receiving, handling, marshaling, dispersion, turnaround objectives, and retrograde shipments will be similar for repair parts GSSAs/DSSAs as those discussed on page 6-3. In the repair parts supply system, containers must be received, marshaled, and temporarily stored in TAACOM and corps GSSAs. Appropriate container handling equipment (CHE) and materials handling equipment (MHE) must be provided in these TOEs. GS and DS maintenance units in TAACOM and corps also will need suitable MHE for the rapid stripping/stuffing of containers.

■ **Storage in Containers.** Stockage requirements for repair parts GSSAs may cause some portion of that stockage to temporarily be in grounded 20-foot containers. Storage operations must consider requirements to identify, organize, and account for stocks onhand; requirements for needed marshaling areas; requirements for recontainerize repair parts shipments; requirements for breakbulk shipments; and requirements for dispersion, security, and other defensive measures.

□ When feasible, repair parts GSSAs should be located in the proximity of

major maintenance activities to facilitate their support. Relative to container handling, such location could eliminate or minimize requirements to ground fully loaded containers in maintenance units. However, if grounding containers in certain GS maintenance units is required, suitable CHE (the 50K pound frontloader) must be provided.

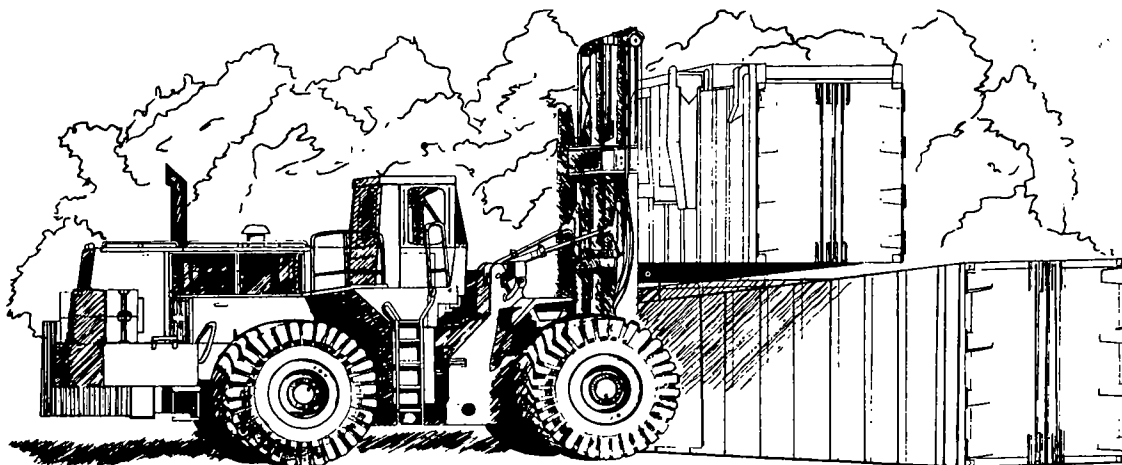
□ Generally, maintenance units will *strip containers as rapidly as possible* and return the chassis and container to the transportation system.

■ **Container/Breakbulk Shipments.** Inter and intratheater distribution patterns are discussed on page 5-1. Generally, recontainerization of repair parts in-theater appears to be less efficient than forwarding breakbulk shipments once containers have been stripped. Container shipments, however, will be made from repair parts GSSAs to maintenance units in both TAACOM and corps areas. Many of such

container shipments may be handled by the GSSA on the "ship to/marked for" basis, and not involve stripping the container at the GSSA. This will require reconsignment actions within the transportation system. In some situations, container loads tailored in a TAACOM GSSA may be forwarded to using maintenance units in forward areas either direct or via a transportation C&D point, noted on page 6-11. Normally, recontainerization by corps GSSAs would not be expected except for retrograde cargo. Containers will not be used by maintenance units in the supply of repair parts to using organizations. In repair parts supply, no movement of containers forward of division rear areas is anticipated.

■ **Retrograde Class IX.** Maintenance units in the division, corps, and COMMZ generate repair parts which would be classified as unserviceable but repairable. Containers being retrograded can be used for evacuation of such materiel to appropriate repair facilities in COMMZ or CONUS.

CHAPTER 7



EQUIPMENT AND UNITS INVOLVED IN CONTAINER OPERATIONS

MATERIEL REQUIREMENTS

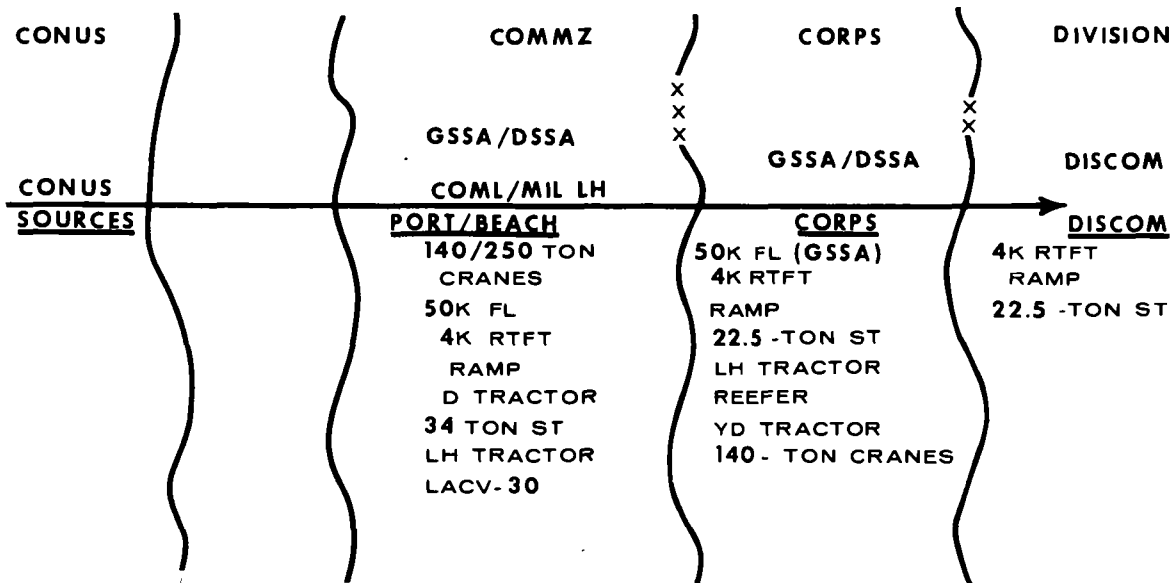
Container movement and handling requires specialized equipment. A *schematic diagram showing the location of container-related equipment in a theater of operations is at figure 7-1*. The diagram indicates certain equipment needed only by transportation units and other equipment needed by both transportation and supply units. The equipment shown is at various stages in the acquisition process. Most critical to the operations of supply units (*table 7-1*) is the new, container-related family of CHE/MHE: the 50,000 pound,

CONTENTS

MATERIEL REQUIREMENTS	7-1
CONTAINER DATA	7-3
ORGANIZATIONAL IMPACT	..7-6

Table 7-1. Supply units requiring MHE for container operations.

GS Units	DS Units
TOE 9-74	TOE 9-64
TOE 29-118	TOE 10-7
TOE 29-119	TOE 29-47
TOE 29-127	TOE 29-77
TOE 29-530	TOE 29-97
	TOE 29-107
	TOE 29-247
	TOE 29-147



LEGEND:

FL - FRONTLOADER

FT - FORKLIFT TRUCK

GSSA/DSSA - GENERAL/ DIRECT SUPPORT SUPPLY ACTIVITIES

LACV-30

LH - LINEHAUL

RT - ROUGH TERRAIN

ST - SEMITRAILER

Figure 7-1. Materiel Requirements Schematic.

rough terrain, container handler (frontloader); the 4,000 pound (low mast) rough terrain forklift truck (RTFT), and the mobile loading ramp (*figures 7-2 and 7-3*). Each GSU in TAACOM and corps will need these items in a quantity commensurate with its handling, marshaling, storing, and distributing requirements. All GSUs must be able to ground, marshal, and load fully stuffed containers on a semitrailer. Presently, the 50,000 pound frontloader is needed to provide this capability for GSUs. There are no plans to issue the 50,000 pound frontloader to DSUs. All GSUs and DSUs will need the 4,000 pound (low mast) RTFT and mobile ramp in suitable quantity for container stripping or stuffing operations. If lightweight (state-of-the-art) equipment becomes available, which is capable of grounding or loading stuffed containers, certain DSSAs (ASPs, maintenance units, and TAACOM S&S units) would be candidates to receive such equipment. While less directly related to supply unit operations and requirements, from the total system viewpoint, the lack of commercial flatrack containers in substantial quantity warrants concern since containerships are generally not effective for vehicle shipments unless flatrack containers are available.

CONTAINER DATA

■ Containers are produced in a wide variety of types and sizes. However, the dry van cargo containers is by far the most numerous in the commercial inventory, and the container type of primary interest to the Army for shipment of the various classes of supply. A typical commercial dry van cargo container is shown at *figure 7-4*. Selected container data, which are essential for development of movement and handling procedures and equipment requirements, are illustrated in *table 7-2*.

■ Relatively few flatrack (platform-type) containers are available from commercial sources. Shipment of vehicles wider than 84 inches in containerships requires flatrack containers. The acquisition of government-owned military flatracks may become a requirement. A prototype military flatrack is pictured in *figure 7-5*.

■ The Joint Container Control Office (JCCO) at Tobyhanna, Pennsylvania, exercises administrative control and accountability for all Army-owned MILVAN containers worldwide.

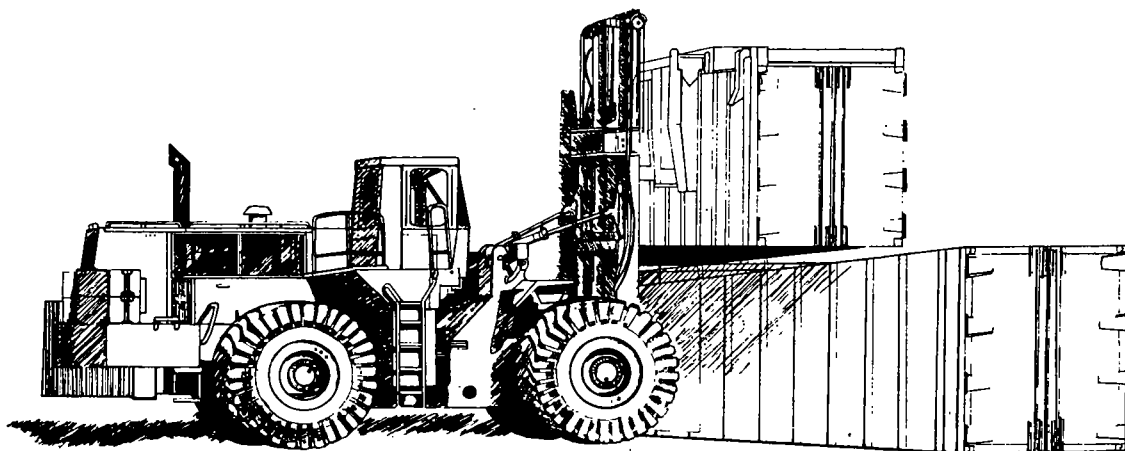


Figure 7-2. 50,000 Pound, Rough Terrain, Container Handler (Frontloader).

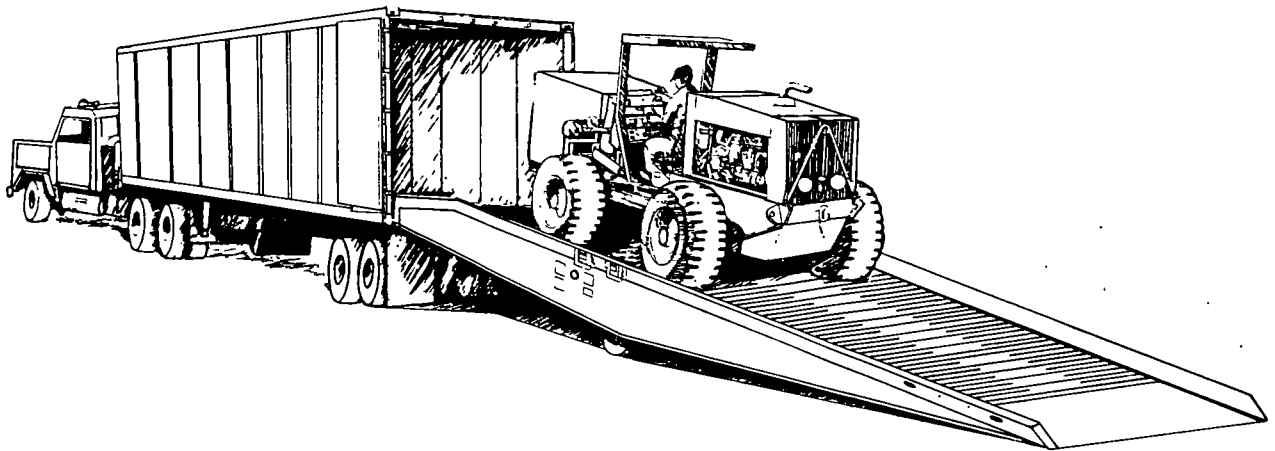


Figure 7-3. 4,000 Pound, Rough Terrain, Forklift Truck and Mobile Loading Ramp.

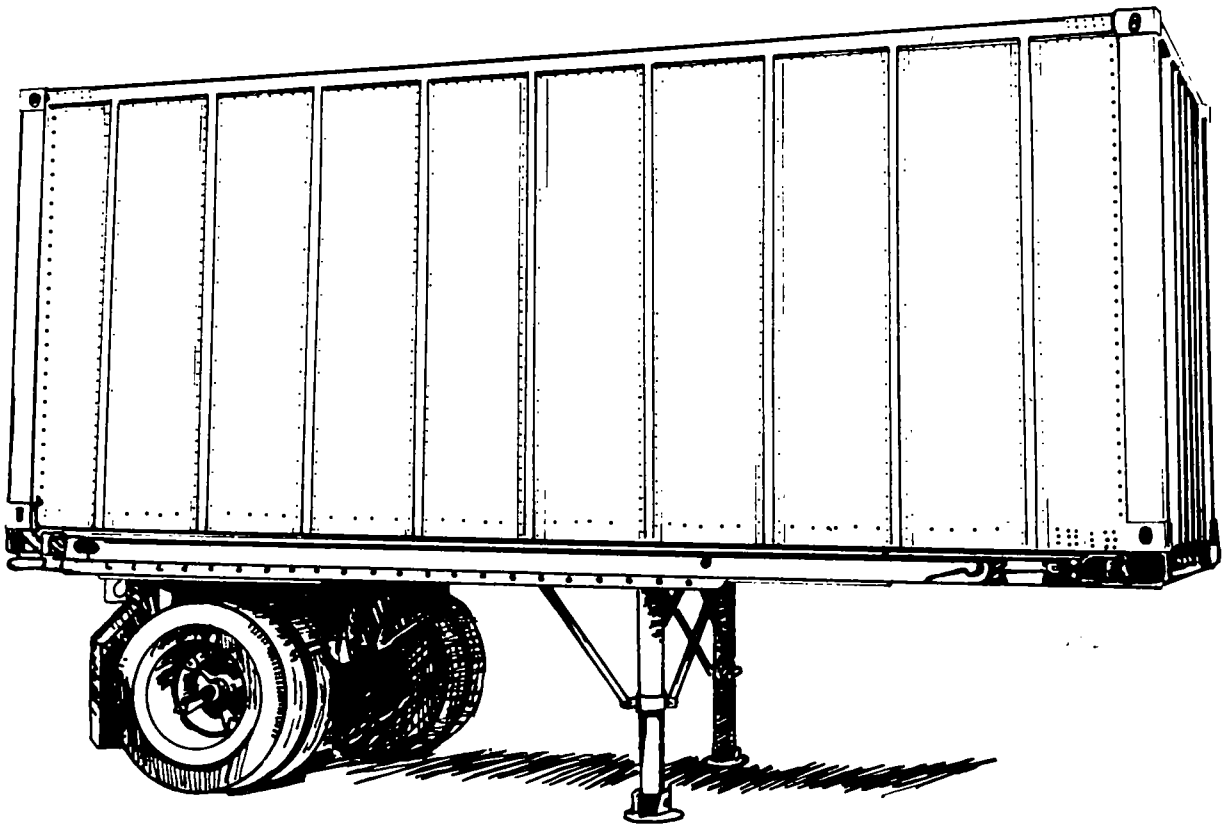


Figure 7-4. Typical Dry Van Cargo Container.

Table 7-2. Container data.

Nominal Exterior Dimensions			Approximate Interior Dimensions			Approximate Interior Cube (ft ³)	Maximum Gross Weight (lbs)	Approximate Tare Weight (lbs)
L	W	H	L	W	H			
40'	8'	9'	39'4"	7'6"	8'5"	2625	67,200	6300
40'	8'	8'6"	39'4"	7'7"	7'8"	2375	67,200	8370
40'	8'	8'	39'4"	7'6"	7'1"	2090	67,200	5000
35'	8'	8'6"	34'7"	7'8"	7'10"	2097	59,000	5500
30'	8'	8'	29'4"	7'6"	7'1"	1703	56,000	4300
24'	8'	8'6"	23'6"	7'6"	7'10"	1415	46,000	4100
20'	8'	8'6"	19'4"	7'9"	7'7"	1160	44,800	4900
20'	8'	8'	19'4"	7'7"	7'4"	1094	44,800	4800

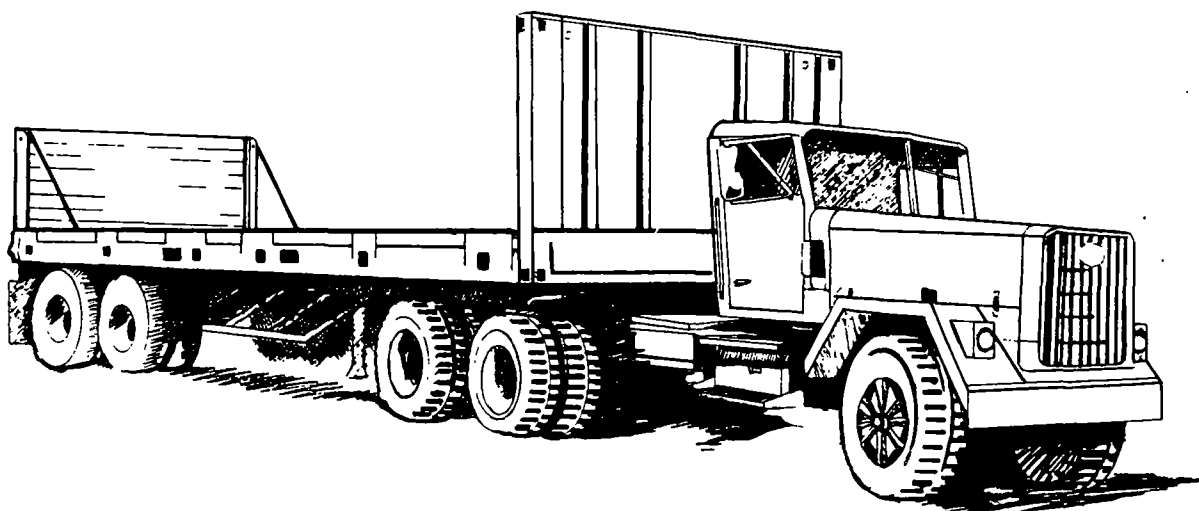


Figure 7-5. Prototype Military Flatrack Container.

ORGANIZATIONAL IMPACT

■ Container-related handling requirements impact on the following general support and direct support supply units:

□ General Support Units.

- *TOE 9-74*—Ordnance Company, Ammunition, Conventional, General Support (Replaces *TOE 9-38*, ordnance company, ammunition, conventional, direct support/general support in the GS mission.)

- *TOE 29-118*—General Supply Company, General Support.

- *TOE 29-119*—Repair Parts Supply Company, General Support, Corps, Army, COMMZ.

- *TOE 29-127*—Heavy Materiel Supply Company, General Support.

- *TOE 29-129*—Aircraft/Missile Repair Parts Supply Company, General Support.

- *TOE 29-530*—Materials Handling Teams.

□ Direct Support Units.

- *TOE 9-64*—Ordnance Com-

pany, Ammunition, Conventional, Direct Support. (Replaces *TOE 9-38*, ordnance company, ammunition, conventional, direct support/general support in the DS mission.)

- *TOE 10-7*—Supply and Service Company, Supply and Transport Battalion, AIM Division.

- *TOE 29-47*—Supply and Service Company, Supply and Service Battalion, Airborne Division.

- *TOE 29-77*—Supply and Transport Company, Support Battalion, Separate AIM Brigades.

- *TOE 29-97*—Supply and Service Company, Supply and Service Battalion, Airmobile Division.

- *TOE 29-107*—Supply and Service Company, Support Battalion, Separate Airborne Brigade.

- *TOE 29-247*—Maintenance and Supply Company, Support Battalion, Separate Light Infantry Brigade.

- *TOE 29-147*—Supply and Service Company, Direct Support.

APPENDIX A

REFERENCES

A-1. Army Regulations (AR).

- | | |
|--------|--|
| 310-50 | Authorized Abbreviations and Brevity Codes. |
| 710-2 | Materiel Management for Using Units, Support Units, and Installations. |

A-2. Field Manuals (FM).

- | | |
|-------|--|
| 9-6 | Ammunition Service in the Theater of Operations. |
| 55-70 | Army Transportation Container Operations. |

A-3. Tables of Organization and Equipment (TOE).

- | | |
|--------|---|
| 10-7 | Main Supply and Service Company, Supply and Transport Battalion. AIM Division. |
| 9-38 | Ordnance Company, Ammunition, Conventional, Direct Support/General Support. |
| *9-64 | Ordnance Company, Ammunition, Conventional, Direct Support. |
| *9-74 | Ordnance Company, Ammunition, Conventional, General Support. |
| 29-47 | Supply and Service Company, Supply and Service Battalion, Airborne Division. |
| 29-77 | Supply and Transport Company, Support Battalion, Separate AIM Brigades. |
| 29-97 | Supply and Transport Company, Supply and Transport Battalion, Air Assault Division. |
| 29-107 | Supply and Service Company, Support Battalion, Separate Airborne Brigade. |
| 28-118 | General Supply Company, General Support. |
| 29-119 | Repair Parts Supply Company, General Support. |
| 29-127 | Heavy Materiel Supply Company, General Support. |
| 29-129 | Aircraft/Missile Repair Parts Supply Company, General Support. |
| 29-147 | Supply and Service Company, Direct Support. |
| 29-247 | Maintenance and Supply Company, Support Battalion, Separate Light Infantry Brigade. |
| 29-530 | Materials Handling Teams. |

*To be published

FM 54-11

- 55-112 Headquarters and Headquarters Company, Transportation Terminal Group.
- 55-116 Headquarters and Headquarters Company, Transportation Terminal Battalion.
- 55-117 Transportation Terminal Service Company.
- 55-560 Transportation Terminal Service Teams.

A-4. Other Publications. *

"The Army in the Field Container System Study," (AFCSS), 1974.

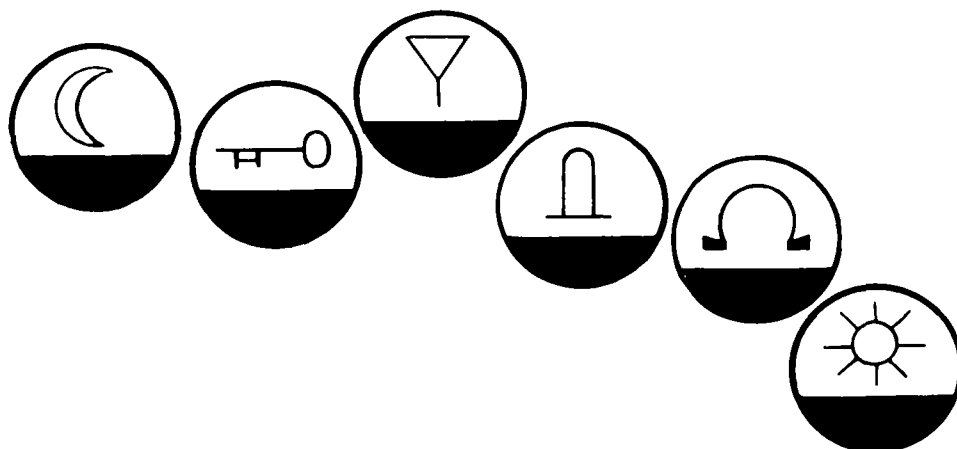
"Containerized Shipment and Storage of Ammunition," (COSSA), 1977.

Logistics Concepts, HQDA, June 1978.

***Available from:**

Commander
US Army Logistics Management Center
ATTN: Defense Logistics Studies
Information Exchange
Fort Lee, VA 23801

APPENDIX B



CLASSES OF SUPPLY

- I—Subsistence
Perishable, nonperishable
- II—Clothing, individual equipment, tentage, organizational tool sets and tool kits, hand tools, and administrative and house keeping supplies and equipment.
- III—POL: Petroleum fuels; lubricants; hydraulic and insulating oils; preservatives; liquid and compressed gases; bulk chemical products; coolants; deicing and antifreeze compounds, together with components and additives of such products; and coal.
- IV—Construction: Construction materials to include installed equipment and all fortification/barrier materials.
- V—Ammunition: Ammunition of all types (including CBR and special weapons, bombs, explosives, mines, fuzes, detonators, pyrotechnics, missiles, rockets, propellants, and other associated items).
- VI—Personal-demand items (nonmilitary sales items).
- VII—Major end items: A final combination of end products that are ready for their intended use; e.g., tanks, launchers, mobile machine shops, and vehicles.
- VIII—Medical material, including medical-peculiar repair parts.
- IX—Repair Parts (less medical-peculiar repair parts): all repair parts and components, to include kits, assemblies, and subassemblies, repairable and nonrepairable, required for maintenance support of all equipment.
- X—Material to support nonmilitary programs; for example, agricultural economic development not included in classes I through IX.



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80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100



INDEX

CLASS IV, CLASS VII,	6-8
CORPS AND DIVISION DSSAs	1-2
CONTAINER CONTROL	4-3
CONTAINER DATA	7-3
CONTAINER DESTINATIONS	1-3
CONTAINER MAINTENANCE	5-3
CONTAINER MARSHALING	2-4
CONTAINERSHIP DISCHARGE	2-3
CONVENTIONAL AMMUNITION, CLASS V	6-5
GENERAL SUPPLIES	6-2
INTRA/INTERTHEATER CONTAINER MOVEMENTS	5-3
MOVEMENT AND CONTROL	5-2
NONREGULATED CLASS II	6-4
ORGANIZATIONAL IMPACT	7-6
PACKAGED CLASS III SUPPLIES	6-4
PORT CLEARANCE	2-4
PORT MANAGEMENT	2-1
REGULATED ITEMS	6-8
REPAIR PARTS, CLASS IX	6-9
RESOURCES	5-2
RETROGRADE AND BACKHAUL	3-7 , 4-4
TAACOM DSSAs	3-5
TRANSPORTATION MODES	1-2



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By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

J. C. PENNINGTON
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The Adjutant General

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